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AUTHOR Aune, Betty; Stockdill, Stacy; Johnson, Donna; Lomas, Devora; Gaipa, Beth; Lorsung, Tina

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ABSTRACT

This final report describes Careers On-Line, a model demonstration project that is designed, using the Internet, to provide students with disabilities, career service providers, and employers with up-to-date information on career development, employment, and disabilities. Careers On-Line developed databases on job and internship postings, adaptive technology products and resources, resume information, job accommodation information, mentoring information, and career and educational planning resources. In addition to developing the databases, the project provided training and consultation to students, employers, and career services personnel. In the first year, staff concentrated their training efforts on students with disabilities at the University of Minnesota. However, the number of students who participated in the project was smaller than anticipated. At the same time, Internet users from across the country began accessing the system. Project staff offered consultation via e-mail and telephone to this group. Throughout the project, staff provided training on the use of adaptive technology in the workplace and how to effectively use Careers On-Line. This report describes the projects' activities, service delivery accomplishments and outcomes, and model building and implications for replication. Appendices include project evaluation activities, presentation agendas, and publicity materials and media coverage of Careers On-Line. (Contains 25 references.) (CR)

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ED 410 711

Careers On-Line:
Career Networks for University Students with Disabilities

Final Report for
Postsecondary Demonstration Program
Project #HO78C30029-95
Office of Special Education Programs,
Office of Special Education and Rehabilitative Services,
U.S. Department of Education

Prepared by
Stacy Stockdill, Ph.D., EnSearch Inc., Project Evaluator
Betty Aune, Ed.D, Project Director
Donna Johnson, Project Coordinator
Devora Lomas, Graduate Research Assistant
Beth Gaipa, Graduate Research Assistant
Tina Lorsung, Administrative Aide

In consultation with
Tim Fitzgerald, Systems Operator
Curt Griesel, Technology Coordinator
Barbara Robertson, Graduate Research Assistant

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Research & Training
Disability Services
12 Johnston Hall
101 Pleasant St. SE
Minneapolis, MN 55455
612-626-9658 (V)
612-626-9649 (V/TTY)
careers@disserv.stu.umn.edu

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Thanks also to former project coordinators:
Rick Battaglia
John Weir

The following individuals served on the Advisory Committee. The affiliation noted was at the time of their membership on the committee.

Representatives of Off Campus Organizations

Jackie Alfonso	*DRAGnet*
Susan Asplund	*STAR Program*
John Berthiaume	*Deluxe Corporation*
Kevin Beckel	*Best Buy*
Pam Belknap	*Division of Rehabilitation Services*
John Berthiaume	*Deluxe Corporation*
Bruce Calhoun	*Best Buy*
Stephanie Corbey	*MN Interagency Office on Transition Services*
Toni Dahl-Wiski	*MN State Council on Disability*
Kathy Erdman	*Project with Industry*
Amy Fafinski	*Project with Industry*
Courtney Fields	*Resource Inc.*
Rebecca Havlicek	*Coca-Cola*
James House	*Easter Seal Society*
Angela Johnson	*Council of Honeywell Employees with Disabilities*
Gwen Johnson	*State Services for the Blind*
Colleen Leahy	*Cargill*
Deb Maxwell	*Deluxe Corporation*
Myk McArdle	*Division of Rehabilitation Services*
Michael Miller	*Northern States Power*
Cynthia Newsom	*AmeriData*
Jerry Norgard	*State Services for the Blind*
John Oyen	*Twin Cities Personnel Association*
Marsha Othoudt	*St. Paul Companies*
Jim Roth	*Project with Industry*
Eugene Sackett	*Unisys*
Shirley Simpson	*Minneapolis Chamber of Commerce*

Robert Taylor	*Unisys*
Louise Teague	*St. Paul Chamber of Commerce*
Sandy Tilton	*Minneapolis Chamber of Commerce*
Rachel Wobschall	*STAR Program*
Lee Zechman	*Dow Brands*

Representatives of On Campus Departments

Brian Abery	*Institute on Community Integration*
Nick Barbatsis	*Office of the Vice President for Student Affairs*
Mary Basco	*Student Employment*
Carl Brandt	*Office of Special Learning Opportunities, CLA*
Sue Forsyth	*University Personnel Department*
Herb Harmison	*Career Planning & Placement Office, IT*
Stephen Klein	*CLA Career Development Office*
Charlie Lakin	*Institute on Community Integration*
Deanne Magnuson	*Continuing Education, College of Education*
Terry Middendorf	*Career Planning/Placement, Carlson School of Mgmt*
Kevin Nutter	*Career Development Center*
Dana Pietso	*Student Employment*
Don Riley	*Office of Sr Vice President for Academic Affairs*
Susan Treinen	*Student Employment*
Shih-Pau Yen	*Computer and Information Services*

Students/Alumni

Chad Amborn	*Career Connections*
Maureen Pranghoffer	*Disabled Student Cultural Center*
Cheryl Zeiszler	*Career Connections alumna*

PROJECT STAFF

The following individuals served on the staff of Careers On-Line:

Sue Kroeger	*Director, Disability Services and Principal Investigator*
Betty Aune	*Associate Director, Disability Services and Project Director*
Donna Johnson	*Project Coordinator (1996)*
John Weir	*Project Coordinator (1995)*
Rick Battaglia	*Project Coordinator (1993-1994)*
Curt Griesel	*Technology Coordinator*
Tim Fitzgerald	*Systems Operator*
Devora Lomas	*Graduate Research Assistant (1995-1996)*
Beth Gaipa	*Graduate Research Assistant (1993-1995)*
Barbara Robertson	*Graduate Research Assistant (1996)*
Tina Lorsung	*Administrative Aide*
Melissa Molitor	*Student Secretary (1994-1996)*
Liz Malherek	*Student Secretary (1993-1994)*
Judy Fox	*Student Secretary (1995-1996)*
Colin Craig	*Student Data Entry Operator (1994-1995)*
Katy Burns	*Student Data Entry Operator (1995)*
Jane Lampland	*Student Data Entry Operator (1995-1996)*
Mary Boeser	*Student Data Entry Operator (1994)*
Mary Zappa	*Student adaptive computer lab attendant*
Al Fryc	*Student adaptive computer lab attendant*

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EXECUTIVE SUMMARY
CAREERS ON-LINE FINAL REPORT

Overview of the Project

Careers On-Line (COL) began as a model demonstration project funded by the Office of Special Education and Rehabilitative Services (OSERS) - U.S. Department of Education and the Offices of the Vice Presidents for Academic Affairs and Student Affairs - University of Minnesota. The goal of the project was to provide students with disabilities, career service providers, and employers with up-to-date information on career development, employment and disability. In order to achieve this goal, Careers On-Line developed the following databases: job and internship postings; adaptive technology products and resources; resume information; job accommodation information; mentoring information; and career and educational planning resources. Disability Services and Distributed Computing Services have taken responsibility for continuing to offer these services beyond the grant period. By establishing an electronic network, Careers On-Line provides an accessible means for students, employers and career services personnel to obtain job, career and disability information.

Careers On-Line is a natural outgrowth of Career Connections (a career development project also funded by OSERS and operated by Disability Services) and the Disability and Computing Project housed within Distributed Computing Services. In the academic year of 1993-1994 (year one of the grant), the Internet was a new frontier and Careers On-Line was made available on Gopher, an Internet browser developed at the University of Minnesota. Because limited career information was available on Gopher, project staff not only designed the databases, but also developed content for these databases. As the Internet became more widely used through World Wide Web, information became available from other sources. In the 1994-1995 academic year (year two), project staff converted Careers On-Line to the World Wide Web. As World Wide Web usage exploded, so did Careers On-Line's usage. Staff developed links to resources across the country, thereby making Careers On-Line a national employment, career and disability resource. In 1995-1996 (year three), Careers On-Line continued to evolve as search and editing features were added to the system, making it more efficient and user friendly.

In addition to its state-of-the-art database system, Careers On-Line provided training and consultation to students, employers and career services personnel. In year one, staff concentrated their training efforts on students with disabilities at the University of Minnesota. However, the number of University of Minnesota students with disabilities who participated in the project was smaller than anticipated. Project staff found that students who were not already using the Internet did not think of it as a viable employment/career development tool. At the same time, however, Internet users from across the country began accessing the system. Project staff offered consultation via e-mail and telephone to this group. Throughout the project, staff provided training on the use of adaptive technology, disability in the workplace and how to effectively use Careers On-Line.

Since the beginning of the project, a high priority has been to design a program that would become integrated into existing services and therefore continue

after the grant period. Disability Services and Computing Services are sharing responsibility in maintaining the databases. In addition, Disability Services is developing a fee-based service to business, which will offer training, consultation, recruitment, and a hotline for information and referral.

Project findings have been disseminated through an annual newsletter, journal articles, conference presentations and annotated bibliographies. Careers On-Line can be viewed at <http://www.disserv.stu.umn.edu/TC/Grants/COL/> or at <gopher://gopher.disserv.stu.umn.edu/11/COL/>.

Accomplishments

Accomplishments of Careers On-Line include the following:

- Designed six databases and maintained them on Gopher and the World Wide Web: job and internship postings, resume information, job accommodations, adaptive technology products, mentoring information, and career/educational planning resources.
- Logged 310,093 hits to its Gopher and World Wide Web sites.
- Recruited 274 employers to submit job and internship postings.
- Posted 3,312 jobs and provided links to thousands of additional jobs.
- Provided training to 2,034 employers and career service providers.
- Collected and analyzed 704 surveys via the Internet.
- Developed and disseminated training manual: *Job Search Techniques for College Students and Alumni with Disabilities.*
- Co-sponsored 2 disability networking events with the Disabled Student Cultural Center.
- Developed and staffed an adaptive technology demonstration lab.
- Provided hands-on Internet training to 49 University disabled students.
- Provided phone/e-mail consultation to 575 individuals, postsecondary institutions and community organizations.
- Completed 2 annotated bibliographies.
- Presented at 12 state, regional and national conferences.
- Attracted television and newspaper coverage of the project.

Outcomes

Outcomes of Careers On-Line include the following:

- Student participants learned how to access and use the Internet.
- Student participants gained access to information about the range of employment options and how their skills were marketable.
- Students, career service providers, and employers connected with a wide range of job resources on the Internet.
- Users obtained information about disability services, career resources and adaptive technology.
- The nondisabled community gained exposure to ways adaptive technology can be applied to work settings.
- Disability Services staff built skills in using the World Wide Web.

Perceived Value of the Project

Participants and staff described the value of the project in these ways:

- Careers On-Line served as a launching pad to the Internet for novice users.
- Careers On-Line contributed to lessening the gap between disabled and nondisabled people's access to technology.
- Consultations provided by Careers On-Line staff benefited the University community, employers, and professionals from other institutions and agencies.
- Resources developed through Careers On-Line continue to benefit students, employers, career service personnel and the disabled community at large.
- The linkage between Distributed Computing Services and Disability Services built adaptive technology capacity at the University of Minnesota.

Recommendations for Replication

The following recommendations are made to other institutions considering replication of the model:

- Build Internet training into ongoing services. Provide opportunities for students to learn how the Internet can be used as a tool.
- Build in interactive aspects to the site. Guide users as to how to take advantage of what the site has to offer.
- Take advantage of existing sites. Developing on-line databases is very labor intensive. As much as possible, make use of what has already been developed by linking to those sites.
- Build an infrastructure that can handle constant change. Everything in technology changes so rapidly that staff need to be prepared to keep up.
- Have a direct line of communication with employers. Follow how employers are using and prefer to use Internet tools.
- Communicate with other career-related sites. Compare experiences that other sites are having with users.
- Collect data on users. Employers want to know who will see their postings.
- Set up an automated data collection system. Obtain software that allows survey data to be downloaded automatically to save on staff time.
- Review data regularly and improve services based on data received. Constantly evaluate and improve the site, based on user feedback.

Conclusions

The experience of this project suggests that the Internet is becoming an increasingly important vehicle for gathering and disseminating information. It is imperative that people with disabilities have access to this technology, because it can provide a competitive edge for individuals seeking employment. College campuses must provide adaptive technology which interfaces with the Internet and technical assistance in how to use it, so that students with disabilities have equal access to the wealth of information on the Internet.

INTRODUCTION

Rationale for the Project

Employment is a pressing issue for adults with disabilities across the nation. A college education improves employment prospects for individuals with disabilities, but their employment rates still fall below that of the general population. The few studies that have been conducted on this population have reported employment rates of 61-67% for students who had graduated within the previous seven years (DeLoach, Sparger, & Pullen, 1988; Frank, Karst, & Boles, 1989; & Silver, Bourke, & Strehorn, 1996). The unemployment problem also is reflected in Minnesota statistics. The Minnesota Department of Jobs and Training reports that the unemployment rate for persons with disabilities in Minnesota is 66% and the average annual income for persons with disabilities is $9,402.

A college education can narrow the gap in terms of employment outcomes. One way in which colleges can enhance career success for students with disabilities is to provide training in the use of technology. Technology is one of the five competencies identified in the SCANS report (Secretary's Commission on Achieving Necessary Skills, 1991) as essential for tomorrow's workplace. Workers must be able to select technology, apply it to a task, and maintain equipment. As computing becomes the norm, people entering the work force with computing skills will have a competitive edge (Hocklye, 1990). Clearly, it is higher education's responsibility to provide opportunities for students to become proficient in the use of technology.

In addition to providing a competitive edge on the job, technology can also help job seekers find employment. There is a growing trend for electronic communications to be used by business and industry in the recruiting and hiring process. The World Institute on Disability reports:

> *Today, employment firms, head hunters, university placement services and others are utilizing telecommunication to bring the resumes of job seekers and job offerers together. This is especially true for upper level, professional positions -- where candidates are drawn from across the country -- or when the search is for a person with very specialized experience or training.*

If people with disabilities are going to be competitive, they must have access to this technology. However, as society becomes increasingly computerized, people with disabilities get further behind, because many of these new technologies are not accessible to them. Carl Brown (1993) warns, "students with disabilities whose functional limitations make computer access difficult or impossible are in grave danger of being pushed aside" (p. 89). Those who have access to computerized information will have more job opportunities than those who do not.

On-line information services provide an accessible means for students with disabilities to seek career and job information and eliminate artificial barriers to job success. For example, electronic communication reduces the need for blind individuals to read want ads and to travel to unfamiliar places. Individuals who are blind can access electronic messages through voice output, a Braille displayer, and/or

a Braille printer. For people who are deaf, electronic communication reduces the need for interpreters and TTY's. Electronic communication allows people with speech impairments to be easily understood and it reduces the need for people with mobility impairments to travel to inaccessible locations. For professional level candidates, their best opportunities for jobs are likely to be in other cities. Electronic communications allows them to search for jobs in a variety of locations. Through electronic communication, employers can see a person's skills and abilities before their disabilities. Applicants are not forced to reveal their disability until they choose to do so.

Information published on telecommunication systems is instantly available to users and can be instantly withdrawn when it expires. The system therefore provides more timely information than is possible through traditional print media. Electronic job postings can give people with disabilities a competitive edge, allowing job seekers to see job postings before they have been published in the daily paper. Job seekers are able to gain much greater exposure to potential employers by posting their resumes electronically than by sending out many resumes.

Training is needed for students with disabilities to access current technologies. According to the adaptive technology coordinator at the University of Minnesota, a growing number of students with disabilities have computers at home, but they don't know how to make full use of their systems. A blind graduate student at the University said, "I have all the hardware and software to use electronic communications, but I don't know how to do it."

Careers On-Line was established to address the problems and opportunities just described. The goal of the project was to ensure that the University of Minnesota provides equal access to technology for students with disabilities, to provide a mechanism for employers and job seekers to easily communicate on a regular basis, and to provide a model for other institutions who seek to improve access for their students. Through electronic communication, it was hoped that students with disabilities would have direct access to a much broader range of employment experiences. Students, graduates, employers and career service providers can access Careers On-Line through Gopher or the World Wide Web. The following are the access points to Careers On-Line through Gopher and the Web:
<gopher://gopher.disserv.stu.umn.edu/11/COL/>
<http://www.disserv.stu.umn.edu/TC/Grants/COL/>.

This report describes the goals and objectives of Careers On-Line, project participants, activities undertaken by project staff, participant satisfaction, and outcomes of the project. Additionally, the report addresses how Careers On-Line evolved, what changes were made from the original proposal and why, and what unanticipated outcomes resulted from project activities. Finally, the report reflects on lessons learned, describes how project activities will be continued, and makes recommendations for adapting or replicating the project.

Context of the Project

Careers On-Line grew out of two previous projects: Career Connections — Disability Services, and the Disability and Computing Development Project — Computer and Information Services. Career Connections, a project funded by OSERS (Office of Special Education and Rehabilitative Services, U.S. Department of Education) and the University of Minnesota, was in its third year when Careers On-Line entered its first year. The new project took advantage of the services and campus network established through Career Connections. The career services offered to students through Career Connections became an ongoing service of Disability Services after the Career Connections grant period ended. These services include career counseling and assessment, mentorship and internship experiences, job search assistance, and networking events with professionals with disabilities. Training for campus staff and community employers on career development and disability in the workplace continue through Career Connections and the outreach initiative of the department.

Career Connections had established a network of 75 employers and had worked with 50 units on campus. Career Connections had also established a strong relationship with Rehabilitation Services and Project with Industry. More than 200 students were enrolled in the program. Careers On-Line continued to work with these employers, providers, and students, providing information and training on the use of electronic communications to improve employment prospects for students with disabilities.

The Disability and Computing Development Project, funded by Computer and Information Services at the University of Minnesota (now called Distributed Computing Services), compiled information about assistive computer technology and provided direct services to students, faculty and staff in selecting and using the technology. The project had been nationally cited by the National Council on Disability as an exemplary technology support program for students with disabilities. Services offered included document conversion, equipment distribution, equipment demonstration, training, and customer support.

Careers On-Line was a natural outgrowth of existing work and developed an innovative approach to enhancing employment opportunities for job seekers with disabilities. Careers On-Line established an electronic network to be used by students, employers, and career services personnel to obtain job and career information. Through electronic communications, students were able to access career and job-related information from their homes, dorm rooms, computer labs spread throughout the campus, and offices of participating organizations.

Purposes and Project Components

The goal of Careers On-Line was to establish an electronic network to link students with disabilities, career service providers, and employers. Project staff developed the following vision statement:

> *Careers On-Line envisions a community linked by electronic telecommunication in which students, campus staff, and employers realize the range of career possibilities for people with disabilities, utilize disability*

resources and adaptive technology, and access on-line services. We envision students gaining a greater sense of control over their futures through the use of technology and we envision employers who — through electronic networks — interview, hire, and advance people with disabilities based on their individual abilities and contributions.

To realize this vision, the project model called for eight components, which are briefly described below (see the "Project Activities" chapter of this report for a more complete description of each component and how it evolved over the life of the project):

Network development. The plan called for an electronic database accessible via the Internet which included job and internship postings, resume information, job accommodation information, and other career-related resources. After the project started, it was decided to also include information on adaptive technology products and resources in the database. The database was originally available via the Gopher browser, but was later transferred to the World Wide Web (WWW) when the Web became the primary medium for accessing information on the Internet. Use of the WWW opened up many possibilities for expanding the services offered. For example, links were made to many other career-related sites on the WWW.

To support project activities and to provide better access to technology for students with disabilities, the University provided funds for hardware and software to equip campus labs with additional adaptive technology. Project staff set up a demonstration lab with state-of-the-art equipment where students could learn how to use the equipment and also how to use electronic communication tools.

Training and orientation. Training was provided to professionals on campus and in the community, including the advisory committee, career service providers, Disability Services staff on all University of Minnesota campuses, and state rehabilitation counselors. The training included demonstrations of adaptive technology products, hands-on instruction on using the on-line services provided by the project, and other career/disability-related topics. Project staff soon discovered that if campus staff were already proficient in using on-line services, little to no training was needed for them to access Careers On-Line.

Campus-based employer involvement. The plan called for a number of small on-campus exchanges involving community employers. In fact, several approaches were used to bring employers on campus. Project staff (1) encouraged advisory committee members to bring guests from the business community to committee meetings; (2) co-sponsored a job fair with the College of Liberal Arts and workshops with diversity units on campus; (3) held adaptive technology forums in which students and project staff demonstrated how adaptive technology products might be used in the workplace, and how to access the services of Careers On-line and other career resources on the Internet; (4) co-sponsored with the Disabled Student Cultural Center networking luncheons as an opportunity for disabled students to network with working professionals with disabilities; and (5) exhibited at career and internship fairs.

The plan also called for site visits to local employers to assist them in gaining access to the network. Very few employers had links to the Internet during the life of the project, so site visits were made simply to demonstrate (on a powerbook) the

capabilities of Careers On-Line services and how employers could participate (for example, employers could fax job postings to Careers On-Line and project staff would enter those postings into the database).

Cooperative agreements. Cooperative agreements were established with 274 organizations (54 written agreements, 220 informal agreements) in which employers agreed to provide job postings to be advertised in the Careers On-Line database. Project staff also established an agreement with the main internship office on campus to post their internship positions. Later, when the internship office began putting their postings on-line themselves, project staff added a link to their site. Project staff also made and fulfilled an agreement with Rehabilitation Services (RS) to provide training on adaptive technology to RS staff. An unexpected source of cooperative agreements were informal agreements made between the Careers On-Line web site and other web sites to provide links to each others' services.

Career experiences of students. The original intent of the project was to recruit and train on-site approximately 150 students to use Careers On-Line services. An additional 35 students were expected to be recruited electronically. Although only 49 students were recruited for on-site training and involvement, thousands of users nationally and internationally accessed the service electronically. It soon became evident that people who were already sophisticated enough to be using on-line services could easily access and use Careers On-Line services with little or no intervention on the part of project staff. However, students who were not using computers for other purposes, such as e-mail, were much less likely to see Careers On-Line as an option for themselves in their job search. They needed not only to be trained in how to use electronic communication but also to change their mindset about using computers as a tool in the job search process. Numerous recruitment efforts were made, including advertisements in the student newspaper, exhibits at campus fairs, articles in student newsletters, and inservices for Disability Services counselors to encourage referrals. Hands-on training was provided in the demonstration lab for interested students.

Technical assistance and information. The plan called for technical assistance to be available on-line, by phone, and on-site. In addition, an electronic information and referral service would be provided. Project staff established an e-mail address that users could use to forward questions to project staff. Telephone and on-line assistance were accessed by users only occasionally. On-site assistance for students was provided in the adaptive technology demonstration lab for approximately 25 hours per week. Two disabled students were hired as lab attendants to assist the technology coordinator in providing this assistance. Although students made regular use of the lab, very little on-site assistance was requested by faculty, staff, and employers.

Dissemination. All of the work described above was disseminated using both electronic and traditional media through listservs, an annual newsletter, conference presentations, an annual annotated bibliography, and contributions to journals and newsletters. In addition, the project enjoyed both television and newspaper coverage.

Advisory committee. An advisory committee of 30 members from the University, businesses, and community agencies provided consultation to the staff through regular meetings and individual contacts.

Clientele

The original targets for Careers On-Line services were University of Minnesota students, metro-area employers, and career service providers on the University of Minnesota campus and in the Minneapolis-St. Paul community. Project staff had not anticipated the vast numbers of people from throughout the U.S. and the world who would access Careers On-Line casually while "surfing the Internet." Thus there were several distinct types of users: 1) students/alumni with disabilities who received "hands-on" training from project staff and who used the University of Minnesota demonstration lab for accessing Careers On-Line (labeled "core" users); 2) students and job seekers (both disabled and nondisabled) who accessed Careers On-Line from the Internet (labeled "casual" users); 3) employers who posted job and internship listings with Careers On-Line; and 4) career service providers who used Careers On-Line to find job leads or information for their students.

"Core users" who used Careers On-Line numbered 49. Casual users could not be counted as precisely. Unless "casual users" filled out and returned a survey, they could only be identified by the location of the computer they used when accessing Careers On-Line. If a particular computer site made 30 "hits" to Careers On-Line on a particular day, there was no way to know whether those hits were made by the same person or by different people using the same computer at different times during the day. Thus staff knew how many *hits* were made to the site, but not how many *people* accessed the site. However, 704 baseline surveys were collected from 405 job seekers with disabilities, 162 job seekers without disabilities, 120 career service providers, and 17 employers.

Of the job seekers who responded to the survey, 72% had disabilities. Of the core users, the largest groups were blind or had a visual impairment (27%) or had learning disabilities (25%). Of the casual users, the largest groups had mobility impairments (31%) or chronic illness (25%). Core users included 67% women, which is much higher than that found in national Internet user statistics. Of casual users without disabilities, 31% identified themselves as persons of color. Additional information about Careers On-Line users can be found in the chapter entitled "Service Delivery Accomplishments and Outcomes."

Sponsorship and Collaboration

In addition to the grant from the U.S. Department of Education, the project received monetary support from Disability Services and the Office of the Vice President for Academic Affairs. Academic Affairs provided $100,000 total over the three years of the project, mainly to provide funds for the purchase of adaptive computer equipment to develop a demonstration lab and other accessible labs on campus. Disability Services provided in-kind support, such as staff time, office space, computer equipment and software, technical computer support, and accounting. All fiscal matters and official documents (e.g. continuation applications) were processed

by the University's grant office, the Office of Research and Technology Transfer (ORTTA). A staff member from ORTTA served as a consultant to the project regarding financial reporting and official guidelines for funded projects.

Project staff collaborated with many other units on campus and with community agencies and employers, including Distributed Computing Services, which loaned a staff member to the project; the Communicators' Forum, which co-sponsored a workshop; the College of Liberal Arts Career Development Office, which co-sponsored several events; the Office for Special Learning Opportunities, which provided internship postings; Rehabilitation Services, State Services for the Blind and Minnesota AHEAD membership, which participated in hands-on demonstrations; and several employers in the metro area, which co-sponsored on-site workshops (Northwest Airlines, Ramsey County, Colle McVoy, Target, Edina Realty, First Bank System). In addition, 9 community agencies, 11 community employers, and 10 campus units were represented on the advisory committee.

Program Evaluation

Careers On-Line utilized a collaborative process evaluation. An external evaluator (Stacey Stockdill, EnSearch Inc.) worked closely with project staff in evaluation design, implementation, and analysis of results. All first-time users of Careers On-Line were asked to complete a baseline survey. In year two, staff developed a three-week follow-up survey that was sent out to all participants who had completed the baseline survey. Users who responded to the three-week follow-up survey were sent another follow-up survey six months later. The follow-up surveys assessed students' involvement with Careers On-Line, level of satisfaction with the service, and outcomes as a result of using the service. A paper copy of the survey was mailed to core users and an electronic copy of the survey was sent by e-mail to casual users.

Contacts and consultations concerning user support and technical assistance were entered in a database and analyzed quarterly to record staff activity and to determine areas for improvement and needs for training. On a monthly basis, staff analyzed data collected automatically when users logged on to the Gopher or World Wide Web server. These data enabled staff to determine how many sites had used the services, from where they had accessed them, and what services had been used. In the summer of year one, staff conducted focus groups of students as a way to provide formative information for improvement of the project. In addition, eight users were interviewed individually. Finally, the external evaluator conducted focus group interviews with project staff at the end of the second and third years of the project. See Appendix A for a more complete description of evaluation activities.

Continuation Beyond Grant Funding

Careers On-Line received a no-cost extension for four months to complete project activities. A major effort in year three and these additional four months was to integrate Careers On-Line services into existing programs at the University. On-line services continued to be offered, with the adaptive technology products database maintained by Distributed Computing Services and the remaining databases by Disability Services.

During year three, Disability Services conducted a market research study to determine the feasibility of offering many of the services of Careers On-Line and of the previous project, Career Connections, to employers on a fee basis. Results of the study indicated that employers did have a need for referral and information services, consultation on reasonable accommodations and physical access, customized training, and on-line recruiting (see the chapter entitled "Model Building and Implications for Replication" for a more complete discussion of this study). Disability Services staff prepared a proposal to provide these services to the business community and presented it to the associate vice president for Academic Affairs. Her office committed a small amount of funds to initiate the new services and has requested significant funds for fiscal year 1998. Disability Services, at the time of this writing, was also seeking corporate sponsors and other funding to assist in launching this initiative.

PROJECT ACTIVITIES

In this section, activities for each objective in the original proposal are described, along with a discussion of what changes were made and why. Page numbers from the original proposal are cited and changes to the original objective are noted in italics.

1.0 Network Development (p. 8-9)

Activities

Network development involved obtaining the hardware and software needed for the project; designing and programming six databases (job and internship postings, resume information, job accommodations, adaptive technology products, mentoring information, and career/educational planning resources); developing procedures for collecting information to put in the databases; researching and referring to other existing databases; designing an interface with the Gopher system on the Internet; recruiting employers to submit job postings to the on-line service; training staff on using the services; and piloting its use with a small group of students.

Objectives

1.1 *By month two, determine the hardware and software capabilities of organizations participating in the pilot and order needed equipment.*

1.2 *By month five, have in place the necessary hardware, software, programming, and documentation for implementation of the network. Network development will continue throughout the project.*

1.3 *By month five, have in place procedures for gathering information to place on the network. From month five through the end of the project, collect career-related information (resumes, job and internship postings, job accommodation information, etc.) and enter into server. Begin with employer network information already collected by Career Connections.*

1.4 *By month six, begin recruiting additional employers to submit job and internship postings, either by faxing them or by accessing the network electronically. Recruit 200 employers by end of project.*

1.5 *By month six, have all key staff trained in the use of the network and begin piloting its use with a small group of students (5 to 6).*

Accomplishments

The first task was to select the hardware and software. After consulting with Disability Services' technology coordinator, project staff decided to use the department's Macintosh server. This made the Careers On-Line database compatible with Disability Services' other databases, an important consideration for

continuation of the project. The necessary site license to use Fourth Dimension (4D) software for database development was purchased and Disability Services' existing Gopher server was used to put the information on the Internet.

Using matching funds provided by Academic Affairs, project staff purchased hardware and software to develop a demonstration lab in a central location on the Minneapolis East Bank campus. This included improving and streamlining scanning systems and refining and expanding voice recognition programs onto Microsoft Windows platform. Complete "talking" public access terminals with access to the Internet and Lumina were developed, tested and placed in the libraries. By the end of April (month 7, year one), additional hardware and software were purchased to make two other labs accessible on the West Bank and on the St. Paul campus.

Project staff determined that most campus units with whom Careers On-Line worked had access to the Internet, with the exception of the College of Liberal Arts (CLA) Career Development Office. In year one of the grant, most employers did not have access to the Internet; therefore, the director of Distributed Computing Services at the University offered to provide 6 months of free access to the Internet for all members of the advisory committee. They received their accounts and training at the May (month 8, year one) advisory meeting.

In developing the network, the adaptive technology products and resources database was produced first, because groundwork for it had already been laid by a previous project (Computing and Disability Development Project). This database included more than 1,000 listings of adaptive technology products and resources in the following categories: computer access, telephone access, reading aids, writing aids, listening aids and speaking aids.

Job and internship postings from 39 organizations were already being sent to Career Connections and provided sample postings with which to work in developing the database. Additional employers were recruited in April (month 7, year one). Letters were sent to 95 employers, including those who attended the College of Liberal Arts Job Fair; those in the Career Connections employer network; and targeted employers in the fields in which participating students were interested. By the end of the grant period, 274 organizations posted job and internship leads on Careers On-Line (see Appendix J for a list of employers who posted with Careers On-Line). Project staff also established a system for entering job postings by scanning into Microsoft Word and then downloading into 4D and then Gopher.

Structuring of the job accommodation information database was completed in year two. This database included case studies and information on providing accommodations for employees with disabilities. The database offered referrals to other electronic lists of accommodation information, including the Job Accommodation Network. A review of the Americans with Disabilities Act was also available in this database.

All databases continued to be expanded as new sources of information were discovered. In year two, the project initiated an electronic page on the World Wide Web. World Wide Web could be accessed without using Gopher, and therefore people without access to Gopher could be reached by the project. The Careers On-Line home page was revised and a program was written and implemented to

automate data reporting, which allowed Careers On-Line to track how many connections were made to each database on Gopher and World Wide Web. All databases developed in year one were refined in year two. For example, the resume database changed substantially since it had been first designed. Project staff learned that Careers On-Line users were more interested in viewing job postings anonymously than in publicly promoting their resumes on the Internet. They were especially cautious of a database that would identify them as having a disability. In addition, the proliferation of commercial resume services on the Internet offered opportunities to students that were not available at the start of the project. The combination of these factors convinced project staff to refocus the database to resume information. Resume writing tips, reference to commercial resume services available on the Internet, and general career development information were now the key components of the resume information database (see Appendix K to review Careers On-Line Brochure).

The technology coordinator and systems operator continued to refine the system in response to questions and suggestions of users. Logs of all questions to the user support service were monitored to ensure that problems with the services were corrected as soon as possible. System changes made in response to user suggestions included adding degree requirements in the job titles, distinguishing the Careers On-Line postings from other postings, keeping expired job postings on-line as references, and updating the databases weekly. In addition to developing the databases, project staff also purchased additional equipment for the adaptive computer labs, which included three new computers with voice recognition, screen reader for Windows, large print software, larger print monitors and new scanning equipment.

In year three, the databases continued to be refined. For example, University career offices had developed a directory of services provided to University students. At the request of these career offices, Careers On-Line added this directory to the career and educational planning resources database and developed a feature which allowed the career offices to update this information autonomously (month 6, year three). Due to the large number of casual users, project staff recognized the need to provide more national job resources. Therefore, the technology coordinator and systems operator began searching for links to employers and job boards throughout the United States. Additional buttons, which allowed users to explore regional, discipline-specific and Minnesota-based job and internship openings, were developed in February (month 5, year three). These buttons allowed users to locate a variety of positions across the country, making the database more helpful to users in other states. Also, in order to better determine user satisfaction, a comments page, which allowed users to provide immediate feedback, was developed in February (month 5, year three). A program was written and implemented to automate data reporting in March (month 6, year three), and a search feature which allowed users to scan the system for specific positions was developed in June (month 9, year three).

In year four (during the four-month no-cost extension), a mentoring and informational interview database was developed to assist core and casual users in identifying professionals in their fields of interest with whom to network. In developing this database, letters were sent to 100 professionals who had previously served as mentors for Career Connections or had in some way contributed to the

professional development of students with disabilities (i.e. attended networking luncheons, served as members of the advisory committee). Twenty-five professionals agreed to participate as on-line mentors. Background information on each mentor was added to the database (see Appendix B to review Mentoring Database Information Form). Also, project staff identified links to mentoring programs throughout the country in order to provide mentoring information to casual users (month 3, year four).

2.0 Training and Orientation (p. 9-10)

Activities

Training and orientation involved preparing career-related campus staff and community agencies to enhance the career development and employment of people with disabilities through technology. Development of self-paced materials for on-line users of the Internet was also included in this area. Most training was hands-on, on the computer, so it was done with individuals or small groups of five to six. Sessions took place in an on-campus lab. In year one, some sessions were done jointly with Career Connections training events.

Objectives

2.1 *Over the three years, train 15 to 25 staff of 5 to 8 campus career planning and placement offices in the following topics:*

- *Rationale for the career network*
- *Use of the career network*
- *Demonstrations of adaptive technology and low cost accommodations for workplace and classroom.*
- *Services available through Disability Services and Distributed Computing Services*
- *For those who have not already had the training, topics from the Career Connections training manual: implementing the ADA; information on specific disability areas; communication issues; job analysis, job descriptions, and job accommodations; and career counseling for individuals with disabilities.*

2.2 *Over three years provide training to 30-50 faculty and staff from other participating organizations/units (e.g., Disabled Student Cultural Center; Martin Luther King Program; Division of Rehabilitation Services; Project with Industry; OSLO, an internship program; academic departments) on the topics listed in 2.1.*

2.3 *By month 6 of year two, develop training materials that can be used on-line for people who are already proficient in using other electronic databases, bulletin boards and E-mail. Approximately 95 additional faculty and staff will be trained this way.*

2.4 *By month 8 of year three, develop training materials that will become an ongoing course offering through Computer and Information Services [now*

called Distributed Computing Services] for use with new faculty and staff hired after the project period.

2.5 *By month 12 of year one, include a section on the career network in the faculty handbook developed by Disability Services which will go out to all academic departments.*

2.6 *In month 6 of year one, train lab attendants in use of the network. Over the three years recruit 6 to 8 students with disabilities to serve as lab attendants in addition to lab attendants already in place.*

Accomplishments

Project staff elected to train the advisory committee (40 members) first. Members were introduced to on-line services at the February (month 5, year one) meeting. On May 3 (month 8, year one), the advisory committee met in a computer lab and received hands-on training of Careers On-Line services. At that meeting, they received their Internet accounts and learned how to access the Internet.

In January of year one, project staff, in cooperation with the outreach unit of Disability Services, provided a workshop on using adaptive technology for information access for 45 members of the Communicators Forum at the University of Minnesota. Project staff also provided an introduction to Careers On-Line services to the College of Education Student Affairs Office.

In year two, Careers On-Line provided training for Disability Services counseling staff, including an update on new features of Careers On-Line and a section from Windmills training on disability awareness. Careers On-Line staff also presented use of the Internet as a job search tool to the Pathfinders Committee of State Services for the Blind which 30 members attended (month 2, year two). Project staff, in collaboration with Disability Services outreach unit, conducted 7 sessions for 82 University of Minnesota library staff. Project staff also provided Internet training to the three University of Minnesota coordinate campuses at Crookston, Morris and Duluth in which 8 counselors participated. Metro-area Rehabilitation Services counselors and Disability Services staff from local colleges and universities were invited to attend Careers On-Line training (month 10, year two). Training materials, including a Careers On-Line User Guide that illustrated how to access Careers On-Line through Internet Gopher and World Wide Web, were developed (see Appendix I for more information on training materials).

Two computer lab attendants provided telephone and on-site support for users. The number of lab attendants was reduced because, for most people, the system was so easy to use that little technical support was needed. The technology coordinator and systems operator were also available to assist users.

A section on Careers On-Line was developed for the faculty guidebook produced by Disability Services, which described the purpose of the Careers On-Line site and how to access it. This guidebook was disseminated to all deans, directors, and department heads. In addition the guidebook is accessible on the World Wide Web, in the University bookstore, and available for purchase by other organizations.

In year three, Careers On-Line provided training for University of Minnesota career services staff (month 7, year three). Career services staff learned how to access the site and how to edit their own service information on the career and educational planning resource database. Training also was provided for Minnesota Association of Higher Education and Disability membership in conjunction with a demonstration of the American Foundation for the Blind's Careers and Technology Information database (month 1, year four).

The technology coordinator developed training materials and at the time of this writing, was negotiating ongoing course offerings with several departments at the University of Minnesota (month 1, year four). For more detailed information see Training Report in Appendix C.

3.0 Campus-Based Employer Involvement (p. 10-11)

Activities

The purpose of campus-based employer involvement was to encourage exchange between students, campus staff, and employers in the community. A variety of activities were sponsored to encourage such exchanges, including events on campus and site visits to local employers.

Objectives

3.1 *Over three years, host eight on-campus exchanges for approximately 65 employers (two in year one, three each in years two and three). These sessions will include demonstrations of adaptive technology by students who use it, demonstration and training on use of on-line services, presentations by employers on topics of interest to students, and informal mentoring. Each event will be co-sponsored with another organization on campus (e.g. Disabled Student Cultural Center, College of Liberal Arts Career Development Office, Alumni Association).*

3.2 *Over three years, make 30 site visits to area employers to assist employers in using their own technology to access and use the career network.*

Accomplishments

Project staff encouraged advisory committee members to invite employers from the community to attend advisory committee meetings. Guests who attended included representatives from the Minneapolis and St. Paul Chambers of Commerce, Unisys, Resource Inc., Deluxe Check, GE Capital, Northern States Power, Dow Brands, Coca Cola, and the City of St. Paul. Some of these guests later joined the committee (see the Acknowledgments for a list of advisory committee members).

In year one, project staff also collaborated with the College of Liberal Arts (CLA) Career Development Office to co-sponsor a job and internship fair, where 70 employers exhibited. Careers On-Line exhibited and project staff visited personally with almost all employers represented. Project staff also presented a workshop entitled "Hiring A Diverse Workforce" in collaboration with the Martin Luther King program and the Gay, Lesbian, Bisexual and Transgender program (month 5, year one) in which information on Americans with Disabilities Act (ADA)

implementation, disability accommodations and communication issues were addressed.

In year two, Careers On-Line continued its work with the CLA Job and Internship Fair. Project staff coordinated a workshop on diversity issues in the workplace and demonstrated Careers On-Line at the job fair (month 5, year two). In collaboration with Career Connections and with the outreach unit of Disability Services, project staff visited on-site with Colle McVoy (an advertising firm), Edina Realty, and Target. Careers On-Line and the Disabled Student Cultural Center co-sponsored a Disabilities Networking Luncheon (month 1, year two) in which University students with disabilities met with professionals with disabilities to discuss employment-related issues including use of technology in the workplace.

In cooperation with State Services for the Blind, Careers On-Line gave two presentations on adaptive technology to 42 employers. Project staff gave two presentations on the ADA to Ramsey County supervisors and employees. Project staff also were involved with two on-campus job fairs during year two. In addition to demonstrating Careers On-Line at the CLA Job and Internship Fair, the project also was demonstrated at the Humphrey Institute Career Action Day (month 7, year two) involving 53 employer and community organizations.

In year three, Careers On-Line gave presentations to 33 Land O'Lakes/Cenex employees (month 2, year three), and 25 First Bank employees (month 3, year three). Project staff coordinated and conducted an Adaptive Technology Forum for 25 local employers (month 5, year three). This event was a half-day conference in which the keynote speaker (a management information systems director) discussed the use of technology in the workplace. Breakout sessions included use of the Internet, local resources for obtaining adaptive technology, accommodating employees with disabilities, creating accessible work environments, and the history and culture of disability. Live adaptive technology demonstrations, in which participants visited various stations, also were included in this conference. Careers On-Line also exhibited at the Minnesota Academy School for the Deaf College Fair, the Minnesota Chapter of the American Deafness and Rehabilitation Association, the College of Liberal Arts Job and Internship Fair (70 employers recruited at this job fair), GradFest and the Humphrey Center's Career Action Day (50 employers recruited at this job fair) (see Appendix C - Training Report and Appendix E - Presentation Agendas).

In year four, Careers On-Line co-sponsored another Disabilities Networking Luncheon (month 1, year four), which approximately 50 students and professionals attended.

Site visits to provide technical assistance on using Careers On-Line services electronically were deemed unnecessary because the majority of personnel with the capacity to hire were not connected to the Internet. Of those organizations who were connected to the Internet, human resources representatives generally did not take advantage of the technological capabilities available to them. Thus most employers sent their job postings via fax and mail. The postings were then put on-line for the benefit of job seekers and career service professionals who were using the Internet.

4.0 Cooperative Agreements (p. 11)

Activities

Cooperative agreements for Careers On-Line were built on the agreements established by Career Connections. The Career Connections agreements with service providers outlined responsibilities regarding traditional services to students with disabilities. Careers On-Line reached informal agreements with the 17 career offices on campus and the Office of Special Learning Opportunities to post career and job-related information. Agreements with employers involved the exchange of job posting information.

Objective

4.1 *Over the three years, develop cooperative agreements with participating organizations (3-5 career placement offices, student employment, all nine metro rehabilitation services offices, Disability Rights Alliance, and 200 individual companies) regarding use of the network. Agreements will address information that each group will provide and access privileges.*
[Note the original goal of 180 companies was increased to 200 companies when the continuation application for year three was written]

Accomplishments

For campus and community agencies, year one was used as a time to explore possible relationships in terms of technology access and exchange. Project staff developed an agreement form that employers signed when they agreed to provide Careers On-Line with positions to be posted on the Internet. These agreements went out in April (month 7, year one) to 95 employers along with a cover letter inviting them to participate in the project.

By year three, Careers On-Line received signed agreements from 54 employers and reached informal agreements with 220 organizations. Office for Special Learning Opportunities (OSLO) also agreed to post their database of internship positions on-line. This database included up to 1,200 internship postings which varied in structure from full-time, part-time, paid, unpaid positions (month 8, year three). Because there was extensive career information on-line that was not available when Careers On-Line began, project staff decided to add links to existing sites. These links provide thousands of job and internship leads to Careers On-Line users.

Project staff reached agreements with all 17 career offices on campus to include information about their services in the database. Career Connections reached an agreement with Student Employment during year one of Careers On-Line. The metro rehabilitation offices were in the process of considering Internet connection options during the project and were not ready to develop an agreement related to on-line services. The Disability Rights Alliance discontinued as a community agency during the project.

5.0 Career Experiences of Students (p. 11-12)

Activities

Early in the development of project planning, two groups of students that the project would serve were identified: core users and casual users. Core users were

those students whom project staff worked with personally. They attended on-site training to learn how to access on-line job postings and other information. These students were generally novices in using electronic communication. If students needed additional career counseling, they were referred to Career Connections.

Casual users were those who electronically accessed Careers On-Line services with no direct contact with Careers On-Line staff. These users were already familiar with electronic communication. They simply located the information while exploring the Internet, or they read Careers On-Line publicity, which included directions on how to access the server.

Project staff discovered that casual users (310,093 computer "hits") far outnumbered core users (49 students). Although the project was unable to count the number of *people* who were casual users unless they voluntarily filled out a survey, the system could monitor the number of *computers* that logged on, the type of institution they were from (educational, government, commercial, military, international, or other), and the sections of the database they used. The original objectives did not account for this group of users. Therefore project staff requested modification of objectives 5.1-5.4 as noted in the bracketed sections below to reflect the type of usage Careers On-Line experienced.

Objectives

5.1 *By month six, recruit 5 to 6 students to participate in pilot use of the network. Participants will be any University students who are eligible for services from Disability Services. By the end of the project recruit 150 students [90 core student users] to participate in the program [45 total in years one and two, 45 additional in year three]. Students will be trained how to access the career network, which they will use to obtain part-time or summer employment, internships, and competitive full-time jobs. They will also access the network to find mentors in their field of interest and contacts for informational interviews and job shadowing, to access information about job accommodations, and to learn more about services available through Disability Services and other participating organizations.*

5.2 *Over the three years, provide direct on-site training to 115 students [90 core student users] in use of the career network.*

5.3 *During years two and three, provide indirect training (electronically) for additional students (approximately 35). [During the life of the project, indirectly serve 25,000 computer hosts.]*

5.4 *Provide daily on-line and telephone support to students on use of the network (estimate 1000 contacts by end of grant period). [Note that this estimate was decreased from original proposal of 2100 contacts. The system is easier to use than project staff envisioned and therefore it is not expected that there will be many contacts for support].*

5.5 *Provide referrals for students who need additional career development or job search assistance to the Career Connections program, their college's career planning and placement office, Project with Industry, and/or Rehabilitation Services.*

Accomplishments

Recruitment. Several methods were used to recruit students. On March 3 (month 6, year one), project staff presented an overview of Careers On-Line to the Disability Services (DS) staff of 50 and explained how DS staff could refer students. In March, an ad was placed in the Minnesota Daily, inviting students to attend GradFest, an event for graduating seniors. The Careers On-Line exhibit at GradFest included a computer demonstration of on-line services. Eight students signed up while at GradFest for the first student training session. On April 4, 1994, letters were sent to 90 Career Connections students, inviting them to participate in Careers On-Line. Project staff also wrote an article for the spring quarter Disability Dispatch, a newsletter that went out to students who were registered with Disability Services. In year one, project staff sent surveys to 700 students registered with Disability Services. Three focus groups with 21 students were conducted to identify career-related issues and to assess best practices for marketing Careers On-Line.

In year two, advertisements were placed in the *Minnesota Daily* and project staff demonstrated Careers On-Line at the College of Liberal Arts Job Fair, the Humphrey Center Job Fair and at GradFest.

In year three, project staff sent cards to graduating students with disabilities inviting them to use Careers On-Line as a job search tool. Staff also placed advertisements in the GradFest insert of the Minnesota Daily and in conjunction with promotion of the Disabilities Networking Luncheon, sent Careers On-Line information to more than 700 students registered with Disability Services.

In all three years, project staff worked with Disability Services counselors to solicit direct referrals. Counselors received training on how to use the system as well as updates on new information available through Careers on-Line. Although project staff made extensive efforts to recruit University of Minnesota students as core users, the project was only able to recruit 49 students. However, the number of casual users was greatly underestimated in the proposal. Six hundred and fifty-five of the 704 baseline surveys returned were from casual users. Therefore, Careers On-Line reached far more users than the 150 students which had been projected in the grant objectives.

Training and support. The first hands-on training for students was April 11 and April 18, 1994 (month 7, year one). Eight students participated in these trainings. The training was divided into two sessions. Before session one, needs for adaptive technology were determined. At the first session, the Internet and e-mail were introduced. Students were given an assignment to complete which they were asked to bring to the second session. The second session focused on Careers On-Line services. Training materials were provided at the sessions and students were given instructions on how to access on-line, telephone, and walk-in support.

In years two and three, students received individualized training in which the technology coordinator or lab attendants demonstrated how to access the databases and how to locate additional career information available on the Internet.

On-line support for students began April 12, 1994 and was provided by the systems operator who did the programming for all the databases. Telephone and walk-in support began April 12, 1994 and was provided by the technology coordinator until computer lab attendants were hired and trained. These services were also available in years two and three and will continue after the Careers On-Line grant period. The systems operator and coordinator provide consultations and referrals via e-mail, while the technology coordinator (through the University's Distributed Computing Services) continues to provide telephone and walk-in support.

The indirect (on-line) training called for in the proposal was found to be unnecessary. Project staff discovered that those users who could access Careers On-Line services without referral did not need training. Most "browsers" who accessed services on their own did not need to learn how to explore the database, for they were already manipulating the database. Approximately 575 contacts were made through ongoing telephone and on-line support. This number includes all users (students, service providers, and employers), as it was not always possible to determine the type of user from e-mail messages.

6.0 Technical Assistance and Information (p. 12-13)

Activities

The purpose of technical assistance was to provide support for campus staff and community employers who were using Careers On-Line services and to serve as a referral source on other technology-related information.

Objectives

6.1 *From month 6 to the end of project, provide on-line (minimum of 4 hours per day) and telephone support (minimum of 4 hours per day) on use of the network for staff, faculty, and employers (estimate 1000 contacts by end of project). [Note that the estimate of the number of contacts was decreased from the original proposal of 2240 contacts. The system is easier to use than expected and therefore it was reasonable to expect less need for support].*

6.2 *From month 6 to end of project, provide on-site technical assistance on request for staff, faculty, and employers (estimate 54 on-site consultations - 24 faculty/staff; 30 employers — see objective #3.2).*

6.3 *From month 6 on, provide referral and information services via E-mail and database for all participants. These services will include notices of events sponsored by participating organizations (e.g., employer forums, career fairs, on-campus recruiting, etc.), referrals to career-related services, and information about where to obtain low and high tech assistive devices. Will also provide on-line resume critiquing and other job search techniques available [Resume critiquing and job search techniques are provided through a cooperative agreement with Career Connections].*

Accomplishments

On-line and telephone support for campus staff and community employers began in May (month 8, year one). Approximately 575 contacts were made via on-line and telephone during the life of the grant (includes service providers, employers, and students). Folders were set up in Gopher for referral and information services and adaptive technology products were already on-line. The job posting database included pointers to several other career-related databases (e.g., On-Line Career Center). An e-mail address also was set up, which people could use to contact project staff with questions or information.

Technical support was offered by lab attendants at the designated computer labs, and by the technology coordinator and systems operator. On-line support focused on resolving issues around accessing Careers On-Line services. Users were provided assistance in using the Internet for finding specific information.

The information and referral service was expanded to include additional information from other campus career placement offices. Additional pointers to electronic databases from other colleges, universities, agencies, and employers were developed.

On-site technical assistance visits were not necessary because the majority of personnel who had the capacity to hire were not connected electronically to the Internet. However, staff did make site visits and offer workshops to demonstrate (on a powerbook) the capabilities of Careers On-Line services and how employers could participate (seeAccomplishments under Objective 3.0).

7.0 Advisory Committee (p. 13-14)

Activities

Career Connections already had an established advisory committee of 30 members, including representatives from University units, community employers, and community agencies. This advisory became a joint committee for the two projects.

Objectives

7.1 *In year one, hold three meetings of the joint advisory committee for Career Connections and Careers On-Line, in fall, winter, and spring.*

7.2 *In year one, invite 5 new members of the advisory committee to represent additional groups participating in the new project.*

7.3 *In both years two and three hold three meetings of the Careers On-Line advisory committee and two subcommittee meetings.*

Accomplishments

In year one, Careers On-Line had three advisory committee meetings (months 2, 5, and 8). Meetings were used to obtain feedback on the development of Careers On-Line services. The third meeting included a hands-on demonstration of the on-line services. New members were added to reflect the interests of Careers On-Line including the associate provost for Academic Affairs, the director of Distributed

Computing Services, the director of DRAGnet (a disability-related bulletin board), a staff member of the STAR program (Minnesota's program to implement the Tech Act), and a representative from Cargill, which has a sophisticated computer network. Two subcommittees were formed one for Career Connections issues and the other for Careers On-Line issues. The Careers On-Line subcommittee dealt with marketing, monitoring job postings, and employer use of technology. The subcommittee met in the spring of 1994, but did not meet again because of a change in personnel.

In year two, advisory committee members met twice as a group and were also invited to an adaptive technology forum sponsored by Careers On-Line. For the fall meeting, advisory committee members were invited to a special event for all Student Affairs staff. Disability Services was highlighted and committee members had the opportunity to meet other Student Affairs staff. The advisory committee met in the spring of 1995 and members were given a hands-on demonstration of Careers On-Line services.

In year three, the advisory committee met in the fall, when committee members provided feedback on possible ways to continue Careers On-Line after the grant ended. The second advisory committee meeting was canceled due to scheduling conflicts. A final advisory committee is planned for spring of 1997 to present the final report and to announce the services that will continue after the grant period ends (see Appendix D for advisory committee agendas).

8.0 Dissemination (p. 40-41)

Activities

Careers On-Line disseminated information and findings through traditional means (newsletters, press releases, conference presentations, annotated bibliographies, and journal articles) and via electronic communication.

Objectives

8.1 *In each of the three years of the project, staff will submit a brief descriptive article about the project to relevant organizations for their newsletters (e.g., HEATH, President's Committee on Employment of People with Disabilities, Division of Rehabilitation Services, Minneapolis and St. Paul Chambers of Commerce, EASI, Disability Rights Alliance, STAR Program, World Institute on Disability, National Career Development Association, Alumni Association).*

8.2 *In year one, produce an annual newsletter jointly with the Career Connections project which will be mailed to over 1000 individuals. In years two and three produce an annual newsletter mailed to at least 1200 individuals.*

8.3 *Submit proposals to present at two conferences in both years two and three. Each conference will be targeted to a different key group — college career planning and placement personnel, rehabilitation services personnel, employers, and a technology organization. Conferences to be considered include AHEAD (Association on Higher Education and Disability); Technology for Persons with Disabilities (CSUN); Closing the Gap; American Rehabilitation*

Association; Association for Counseling and Development; President's Committee on Employment of People with Disabilities; Annual Meeting of OSERS Project Directors; American Society of Training and Development; Society for Human Resources Management (SHRM).

8.4 *Submit two manuscripts each in years two and three to relevant journals, again seeking to reach the audiences described above. Journals such as Career Development Quarterly, Journal of Job Placement, Careers and the Disabled, NASPA Journal, Minnesota Alumni Magazine, Corporate Report, and the Training and Development Journal will be considered for submission. Topics for the articles will include a description of the project, a report on results of the pre-post- survey used for project participants, a qualitative study using interviews of network users, and a data-based article on outcomes of the project.*

8.5 *In year two, develop an on-line database for the Job Accommodation Manual developed by Career Connections. Disseminate nationally through WIDnet, the World Institute on Disability on-line service.*

8.6 *In year three, disseminate via E-mail lists and USENET the on-line training materials developed by the project and other project information (See Objective 2.3).*

8.7 *In year one, develop an annotated list of career-related on-line services. Disseminate the list by announcing its availability in the annual newsletter and providing to interested organizations. Also include it in the Information and Referral Services (See Objective 6.3) provided on-line.*

8.8 *In years two and three, write an annotated bibliography of research and materials related to disability, careers and technology, particularly electronic communications. Submit the bibliography to ERIC and make available to the public via announcements in the newsletter and on-line.*

Accomplishments

In October (month 1 of year two), a descriptive article about the project was published by several organizational newsletters, including the Disability Dispatch, Access Press, Minnesota AHEAD, the Minnesota Daily, University of Minnesota Brief, the Great Lakes Disability and Technical Assistance Center, and Career Connections newsletters (see Appendix K for sample articles). Careers On-Line services were also announced over two listservs — AbleJobs and EASI (Equal Access to Software and Information).

Conference proposals were submitted in the fall of year one for conferences in year two, and project staff were invited to present at the Midwest College Placement Association Conference; the College Placement Council's national meeting; and "Closing the Gap," a national technology conference. In addition, project staff presented a poster session at the annual project director's meeting.

An annotated bibliography related to disability, careers, and technology was written and disseminated in June (month 9, year one). The bibliography was submitted to ERIC and put on-line in year one. In addition, an annotated list of career-related on-line services was developed and sent out with the follow-up survey done in year one.

The Job Accommodation Handbook that was compiled by Career Connections was put into a database and, downloaded to the Gopher and World Wide Web servers.

In year two, Careers On-Line received media coverage when a piece was aired on the local NBC affiliate about Careers On-Line and the adaptive computer lab (month 12, year two). An article in the *Minneapolis Star Tribune* featured Careers On-Line and other career-related Internet sites (month 2, year two).

Project staff presented at Closing the Gap (month 1, year two), where 40 professionals attended the session; the National Association of Colleges and Employers (month 9, year two) where 600 employers and career service providers attended the poster session; the annual OSER's Project Director's meeting (month 9, year two) where 200 people attended; Minnesota Library Association (month 10, year two) where 50 attended; and the Midwest College Placement Association (month 12, year two) where 40 people attended.

In year three, Careers On-Line was featured in the *St. Paul Pioneer Press'* "Pioneer Planet Hotlist" and in an article in the *St. Paul Pioneer Press* (month 6, year three). Project staff presented at the following conferences: Salt Lake City Community College (month two, year three) where 35 attended; the Division of Career Development and Transition, Council on Exceptional Children (month one, year three) where 50 attended; California State University at Northridge Technology and Disability conference (month 6, year three) where 40 attended; President's Committee on Employment of People with Disabilities (month 8, year three) where 150 attended; the Annual OSERS Project Director's Meeting (month 9, year three) where 100 attended (poster session); the Learning Disabilities of Minnesota Conference where 30 attended (month 2, year three); the Minnesota AHEAD conference (month 7, year three) where 35 attended.

In year four (during the extension period), project staff presented at the Minnesota Rehabilitation Counseling Association (month 2, year four) where 60 attended. In addition, the external evaluator presented at the American Evaluation Association conference in Atlanta Georgia (month 2, year four). For additional information, see Appendix C for Training Report and sample training evaluations.

Project staff also published an article in the *Journal for Vocational Special Needs Education,* a descriptive article in the Human Resources Professionals of Minnesota's newsletter, and a training manual entitled, *Job Search Techniques for College Students and Alumni with Disabilities* (which includes information on how to use the Internet as a job search tool) and an annotated bibliography which focuses on careers and technology. Another article will be submitted for publication summer of 1997. For additional information on articles and publications, (see Appendices H and I).

SERVICE DELIVERY ACCOMPLISHMENTS AND OUTCOMES

This section of the evaluation report provides a brief overview of the evaluation and summarizes data obtained through a number of methods.

Summary of Evaluation Design

The Careers On-Line evaluation was formative during the first two years of the project and summative during the final year of activities.

Information was collected from different categories of Careers On-Line users, including: 1) core users -- students/alumni with disabilities who received hands-on training from project staff and who used the University of Minnesota demonstration lab for accessing Careers On-Line, 2) casual users -- students and job seekers (both disabled and nondisabled) who accessed Careers On-Line from the Internet, 3) employers who posted job and internship listings with Careers On-Line, and 4) career service providers who used Careers On-Line to find job leads or information for their students.

Both quantitative and qualitative data collection methods were used. Detailed descriptions may be found in Appendix A.

The quantitative methods focused on the individuals who connected with Careers On-Line at its Gopher and/or World Wide Web sites. These methods included:

- **Baseline Survey.** All users were asked to complete a survey when they were first introduced to Careers On-Line (see Appendix B). Core users who received training at the University of Minnesota filled out a paper or on-line survey. Anyone who accessed Careers On-Line through the Internet could complete an on-line or mail survey. A total of 704 baseline surveys were received.
- **Three-week Follow-up Survey.** Three weeks after completing a baseline survey, each participant was sent a follow-up survey through either their e-mail account or through the U.S. mail (see Appendix B). A total of 182 responses were received.
- **Six-month Follow-up Survey.** A six-month follow-up survey was sent to those users who returned a three-week follow-up survey (see Appendix B). Even though a number of steps were taken to increase response rates, only 37 surveys were obtained.
- **System Statistics.** System-generated statistics regarding the number of computers accessing the Gopher or World Wide Web pages of Careers On-Line were analyzed. These logs recorded the number of hits to the Careers On-Line sites, the number of hits by type of institution (e.g. education, commercial), the number of hits from computers located at the University of Minnesota, and the use of Careers On-Line databases.

The following qualitative methods also were used to gather information:

- **Telephone Interviews.** Eight users participated in individual in-depth interviews with the project coordinator (see Appendix B for Interview Protocol).
- **Document Review.** The evaluator reviewed a number of documents and materials produced by Careers On-Line staff.
- **Focus Group Interviews.** The evaluator conducted focus group interviews with staff at the end of the second and third program years to identify strengths, weaknesses, outcomes, and lessons learned.

Together and separately, the qualitative and quantitative results were used to assess the impact and effectiveness of Careers On-Line. Careers On-Line has been a pioneer in the use of system-generated and Internet-mediated surveys. The lessons learned concerning evaluation methods are discussed at length in Appendix A.

Data Summary Outline

The data obtained are summarized in the remainder of this chapter and are organized as follows:

- **Careers On-Line Overview** summarizes the Careers On-Line services to provide a context for the conclusions drawn.
- **Reaching the Target Population** reports on conclusions made regarding program outcomes based on statistics generated through Gopher and the World Wide Web systems and users' responses to the baseline survey.
- **Initial Satisfaction with Careers On-Line and Short-Term Outcomes** contains conclusions regarding user satisfaction and outcomes based on the data collected from users responding to the three-week follow-up survey.
- **Long-Term Satisfaction and Long-Term Outcomes** includes satisfaction and outcome data for users who responded to the six-month follow-up survey.
- **Assistive Technology Lab Usage and Training Evaluation Summaries** presents data regarding the use of the Assistive Technology Lab and the results of evaluations collected by participants in Careers On-Line workshops.
- **Case Scenarios** provides a view of how users interacted with Careers On-Line, the benefits they incurred, and ways Careers On-Line could have been improved from their perspectives.
- **Value of Careers On-Line** addresses the overall value of the Careers On-Line project.
- **Conclusions Regarding Careers On-Line** is a compilation of all the evaluation sections and addresses what was gained from the Careers On-Line project.

Careers On-Line Overview

To provide context for the data to come, this description of Careers On-Line was adapted from *The Journal for Vocational Special Needs Education:* (Aune, 1996).

Careers On-Line:

- "seeks to address the critical need for access to and training in the use of adaptive technology and Internet tools to enhance employment opportunities for individuals with disabilities," (p. 77).
- "offers career and employment information via electronic communication geared specifically for college students and graduates with disabilities" (p.77).
- "enables the job seeker to access thousands of job postings, in addition to information about resume services, job accommodations, and adaptive technology products" (p.77) by accessing the World Wide Web or Gopher.

Through Careers On-Line, users can access:

- the **adaptive technology products and resources database,** which lists over 1,000 equipment and software products that make information more accessible to people with disabilities (e.g., adaptive keyboards, speech synthesizers, large print screens, telephone devices for communicating with deaf users).
- the **job and internship postings database,** which lists thousands of job postings with Careers On-Line and with other databases on the World Wide Web such as Catapult, Career Mosaic, and JobWeb.
- the **job accommodation information database,** which includes scenarios of how individuals and employers have accommodated disability in the workplace.
- the **resume information database,** which provides links to resume services available on-line such as Res/Net International, Resume On-Line, WWW Resume Bank, Hyper-Media, and JobTailor.
- the **career and educational planning resources database,** which provides information on career-related services at the University of Minnesota.
- on-line and telephone support and information.

In addition,

- career service providers and employers can obtain training and consultation through workshops, conference presentations, and on-site visits.
- students with disabilities, who serve as lab attendants, train other students in using adaptive equipment and Internet tools in a state-of-the art adaptive computer lab.
- project staff produce print materials including guides for accessing Careers On-Line; annotated bibliographies; a job search training manual; and an annual newsletter.

Reaching the Target Population: System Statistics Outcomes

The data indicate that the following conclusions are warranted regarding the extent to which a usable system was developed for providing job, career, and adaptive technology information.

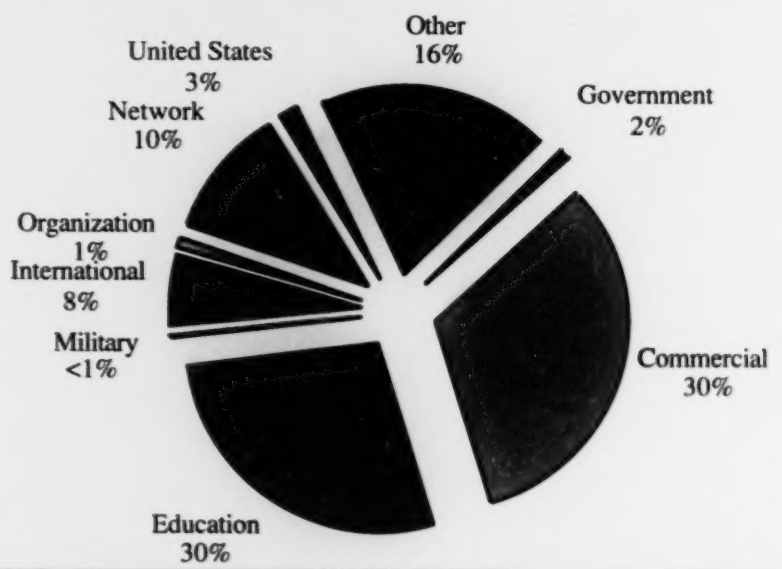
Careers On-Line staff developed a comprehensive system which maximized recent technological developments. Project staff were aware of significant changes in electronic communications technologies and the development of Netscape. They redesigned certain aspects of the Careers On-Line project and retooled Careers On-

Line services to maximize system capacities and meet the demands of users. As a result, the project reached far more users than anticipated.

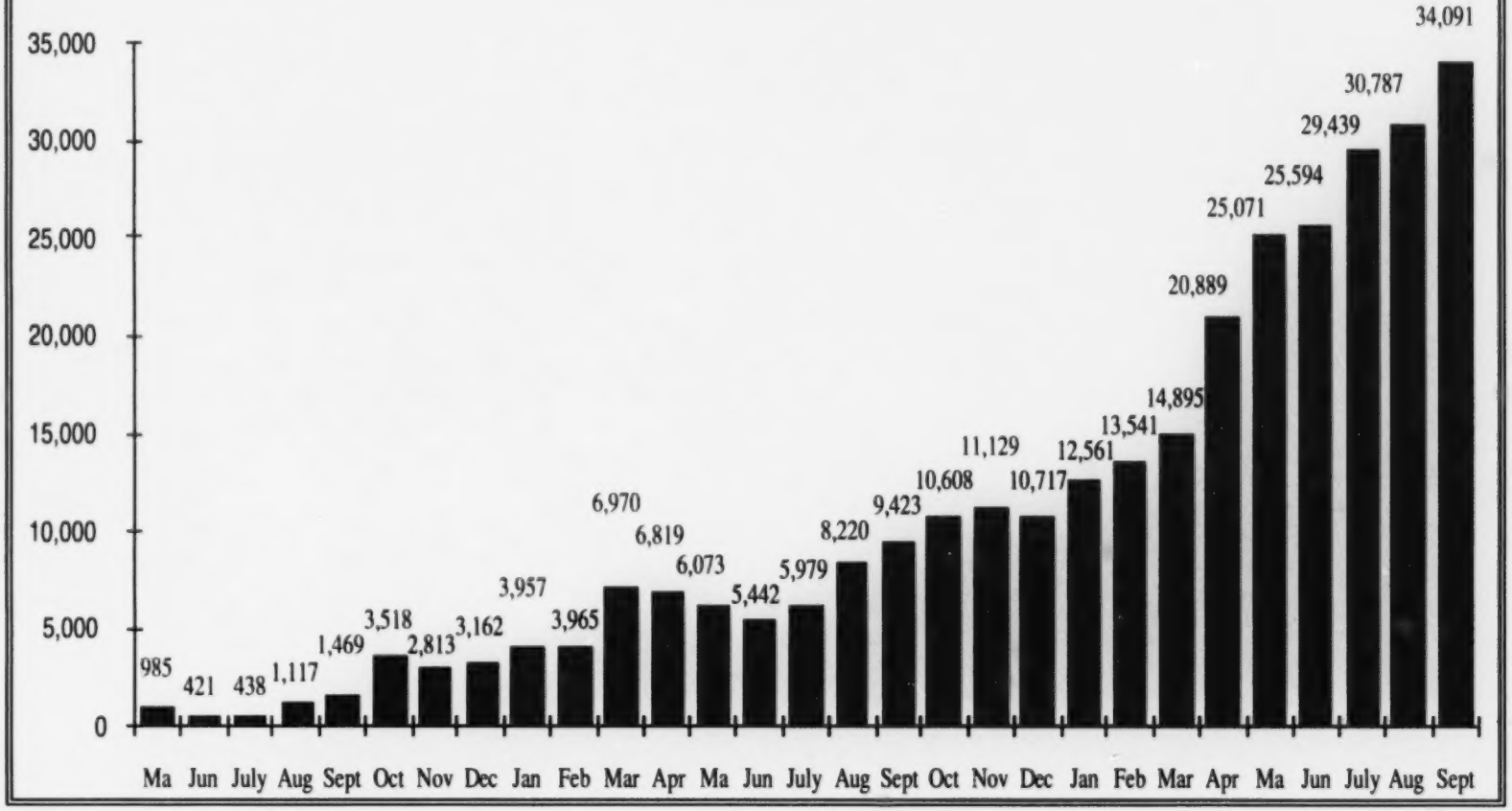
Careers On-Line was used 310,093 times. The system records how many times a computer terminal accesses the Careers On-Line site and various folders either through the World Wide Web or Gopher. From May 1994 through September 1996, there were 310,093 hits (see Graph 1 on the following page). The monthly hits have increased in frequency from 985 (May 1994) to 34,091 (September 1996). The number of hits was influenced by Careers On-Line being connected electronically with a number of other Web job posting sites (such as *Career Mosaic*), sites frequented by users with disabilities (such as the Evan Kemp Disability Solutions web site), and search engines (such as *Yahoo*).

Careers On-Line was utilized most frequently by individuals using commercial or educational accounts. The largest percentage of hits came from individuals using computers located at educational institutions (referred to as education on Graph 2) and at ".com" sites (referred to as commercial on Graph 2 -- commercial accounts include providers such as America On-Line). Of the 310,093 hits, 92% were from computers located in the United States and 8% were from computers located in countries other than the United States. The 3% United States (shown in Graph 2) represents users who have added ".us" (such as @informns.k12.mn.us) to their addresses.

Graph 2
Source of Hits
(Gopher and World Wide Web Combined)
N = 310,093
May 1994 - September 1996

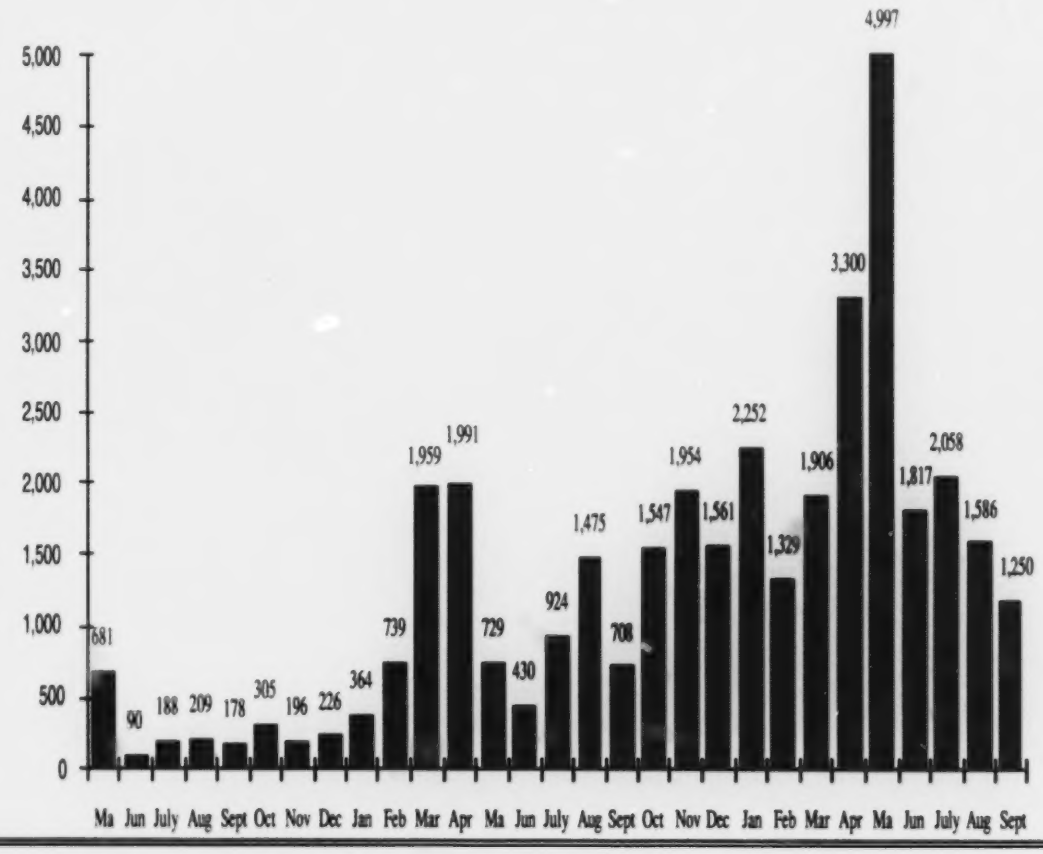


Graph 1
Hits by Program Month
(Gopher and World Wide Web Combined)
N = 310,093
May 1994 - September 1996



Careers On-Line served individuals located at the University of Minnesota. Since May 1994, hits from computers located at the University of Minnesota totaled 36,949. This represents 12% of the total. As the data in Graph 3 show, the number of hits from University of Minnesota computers has consistently increased since May 1994 and builds each year from lower usage during the summer months of June/July/August toward high usage in March/April/May when students are more likely to be searching for job and career information.

Graph 3
Hits from U of MN Computers
(Gopher and World Wide Web Combined)
N = 36,949
May 1994 - September 1996

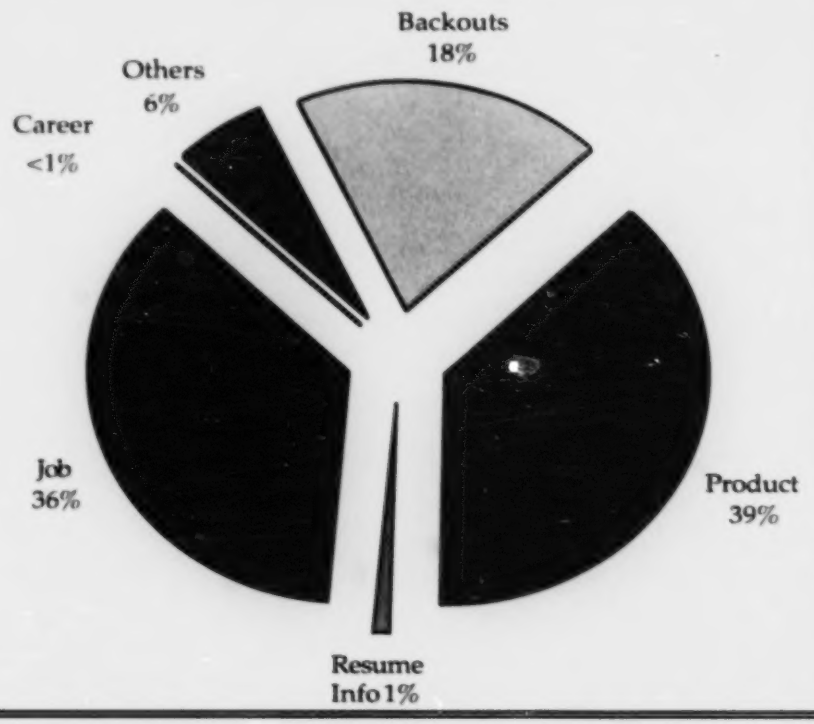


Careers On-Line linked job postings from 274 employers to Gopher and/or Web users. Careers On-Line staff developed *Careers On-Line's Job and Internship Postings*, a job database. During the grant period, it included 3, 312 job and internship postings from 274 employers. These included governmental agencies, corporations, nonprofit organizations, and educational institutions. Job postings

were screened and only those appropriate for college students and graduates were posted on the Careers On-Line site (see Appendix J).

Careers On-Line gave users access to job information, resume information, career and educational planning resources, and adaptive technology products and resources. The resume information database, career and educational planning resources database, and adaptive technology products and resources database as well as Careers On-Line's job and internship postings database were made available through Careers On-Line and were accessed by a number of users. The Careers On-Line's job and internship postings database (referred to as Job on Graph 4) and adaptive technology products and resources database (referred to as Product on Graph 4) were accessed most frequently (see Graph 4). Backouts are defined as users who connect to the Careers On-Line home page and then exit before opening other folders.

Graph 4
Folders Accessed
(Gopher and World Wide Web Combined)
N = 310,093
May 1994 - September 1996



Users received on-line technical assistance from Careers On-Line staff. Careers On-Line staff provided technical assistance on-line to various users. Data indicate that staff received 3,183 e-mail requests (see Table 1). The 369 e-mail messages listed as "Other" included messages from users who wanted to add Careers On-Line to

their Web site, add their Web site to Careers On-Line, had questions about where to find product providers, etc. Project staff provided information to these users. The E-mail Request Form was used to collect e-mail addresses for the surveys. The Survey Form, Employer-User Survey, and Student-User Survey were the documents sent out or received for the evaluation (see Data Collection Instruments - Appendix B). The Job Openings Form was used by employers to post jobs with Careers On-Line.

Table 1
Responses to Users On-Line
Total = 3,183

Nature of Request:	Number	Percentage
E-mail Request Form	1,780	56%
Other (questions regarding how to add Careers On-Line to their Web site, where to find product providers, general use questions, etc.)	369	12%
Survey (surveys sent by e-mail)	987	31%
Job Openings (a form employers could use to post job openings)	47	1%

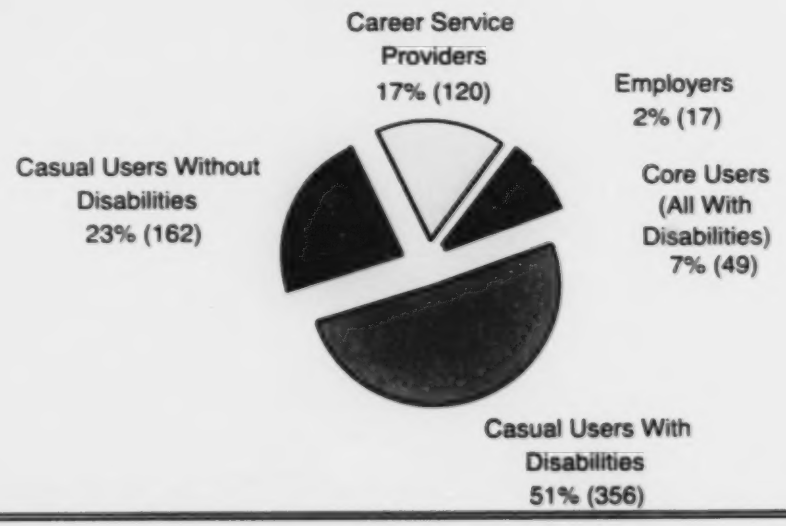
Baseline Survey Results

Baseline surveys were used to collect demographic information on and obtain feedback from the users represented in the system statistics. Varied approaches were used to obtain this information: 1) users to the Web site were asked to complete the survey during the time they visited the site, 2) surveys were sent to users who supplied their e-mail or mailing addresses, or 3) core users were asked to complete a paper and pencil or e-mail version of the survey at the demonstration lab.

It is useful to remember that the users of Careers On-Line included in the system statistics included: 1) core users -- students/alumni with disabilities who received hands-on training from project staff and who used the University of Minnesota demonstration lab for accessing Careers On-Line, 2) casual users -- students and job seekers (both disabled and nondisabled) who accessed Careers On-Line from the Internet, 3) employers who posted job and internship listings with Careers On-Line, and 4) career service providers who used Careers On-Line to find job leads or information for their students or clients.

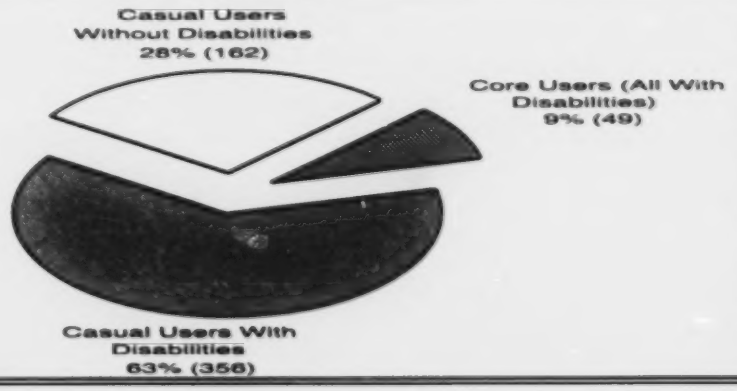
Of the 704 baseline surveys obtained, 49 (7%) were from core users (all with disabilities); 356 (51%) from casual users with disabilities, 162 (23%) from casual users without disabilities, 120 (17%) from career service providers, and 17 (2%) from employers (see Graph 5).

Graph 5
Baseline Survey Respondents
N = 704



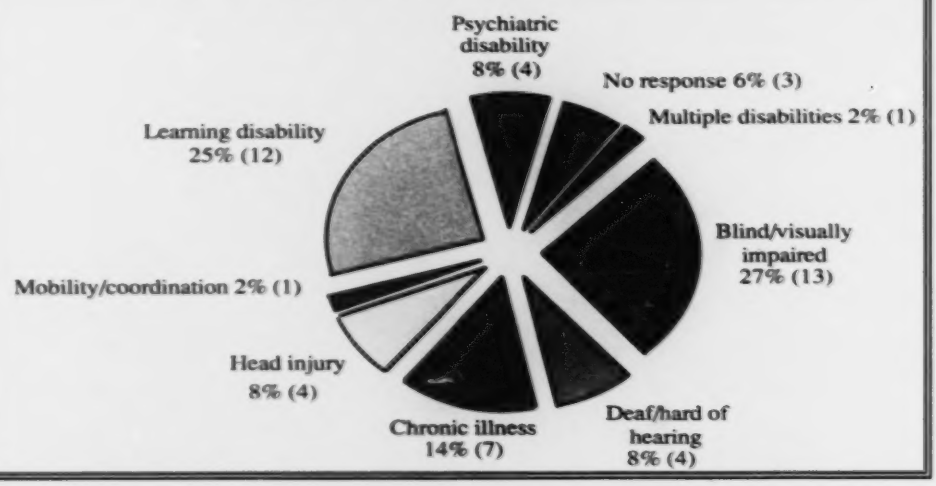
Careers On-Line reached users with disabilities. There was concern that the users of the Careers On-Line services might not reach the intended target population, users with disabilities. The baseline survey data indicate that Careers On-Line was successful in reaching this population. Of the total number of core and casual users who responded, 72% (63% casual, 9% core) were users with disabilities (see Graph 6).

Graph 6
Baseline Survey Respondents
Users with Disabilities
N = 567



When asked, "What is your primary disability?" core users most frequently reported disabilities in the blind/visually impaired and learning categories (see Graph 7).

Graph 7
Baseline Survey Respondents
Primary Disability
Core Users (All With Disabilities)
N = 49


Psychiatric disability 8% (4)
No response 6% (3)
Multiple disabilities 2% (1)
Learning disability 25% (12)
Blind/visually impaired 27% (13)
Mobility/coordination 2% (1)
Head injury 8% (4)
Chronic illness 14% (7)
Deaf/hard of hearing 8% (4)

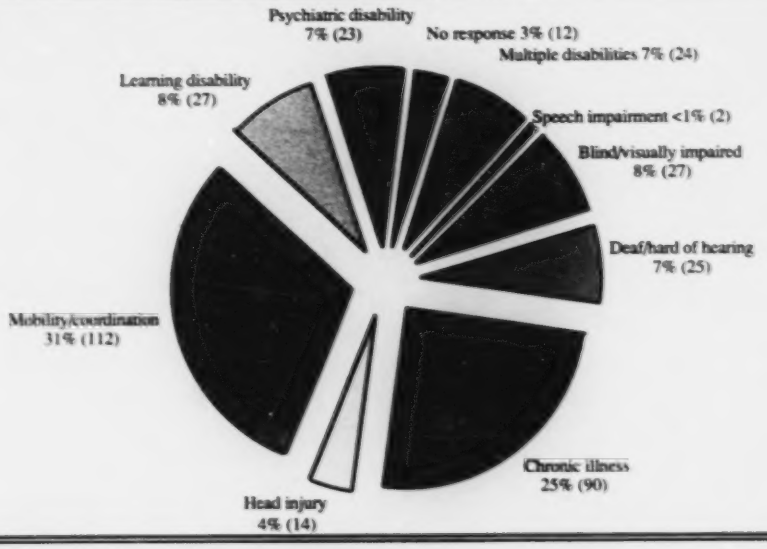
Casual users with disabilities tended to report chronic illness or mobility/coordination disabilities (see Graph 8).

Many of the 114 career service providers who responded to the baseline survey were disabled (25%) and 6 of the 17 employers reported a disability.

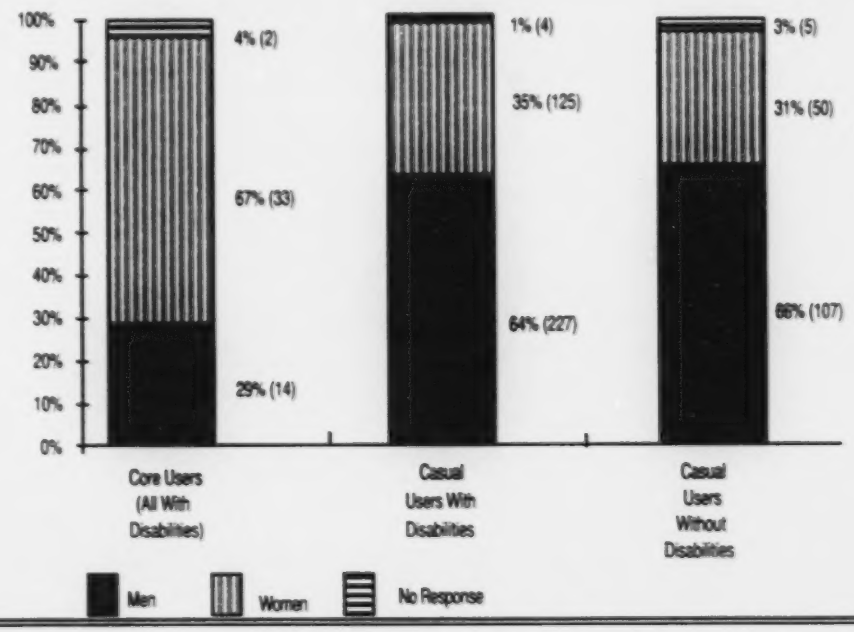
Most core users were women, a contrast from casual users and most Internet user statistics. Women made up the largest percentage of Careers On-Line core users, while the largest percentage of casual users were men (see Graph 9). Careers On-Line reaching women was seen as significant because most studies of Internet users indicate that few are women. For example, Fisher et al. (1995) reported data from their 1994 study where 20% were female, the Pitkow (1995) study found 10% female, the Cobb (1995) survey of CompuServ users found 17% were female, and survey of America OnLine users reported 16% were female.

The number of career service providers and employers was fairly evenly divided by gender; 51% of the career service providers were women and 47% of the employers were women (2% did not respond to this question). These percentages were higher than would be expected if comparing to national Internet user statistics.

Graph 8
Baseline Survey Respondents
Primary Disability
Casual Users With Disabilities
N = 356

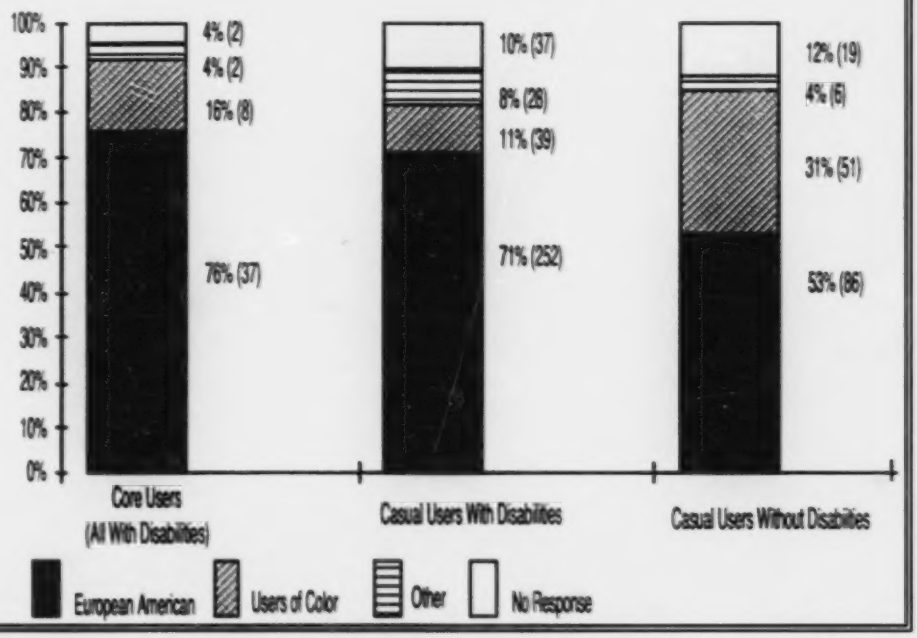


Graph 9
Baseline Survey Respondents
Gender
N = 567



Careers On-Line reached users of color. The Careers On-Line core and casual users were primarily of European American descent, but services were accessed by users from other ethnic backgrounds as well (see Graph 10).

Graph 10
Baseline Survey Respondents
Ethnicity
N = 567



A detailed breakdown of ethnicity is provided in Table 2. Users who chose the category "Other" identified multiple categories (such as White/American Indian, African American/European American); preferred the term White or Caucasian or Jewish; were from countries other than the United States; or offered obscure responses such as "retired military".

Three career service providers and three employers were people of color; the largest percentage of the 120 career service providers were European American (74%). Of the 15 employers, 73% were European American.

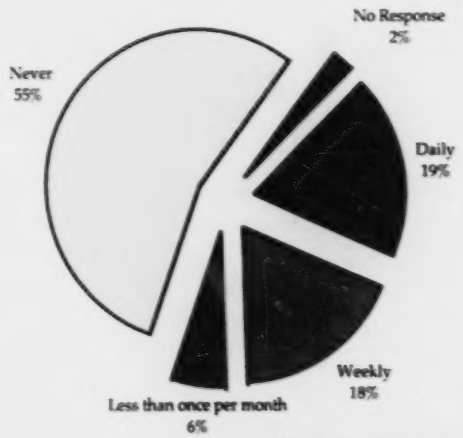
Careers On-Line reached core users with limited experience using e-mail and the Internet. Careers On-Line staff hoped to reach core users who had limited e-mail and Internet experience. Many first used the Internet during their initial training with Careers On-Line staff or with lab assistants when they completed the baseline survey. The data show that, before participating in Careers On-Line, most core users had never used e-mail (55%) or the Internet (64%) and only a few had used e-mail or the Internet daily, weekly, or monthly (see Graph 11).

Table 2
Baseline Survey Respondents
Ethnicity
N = 567

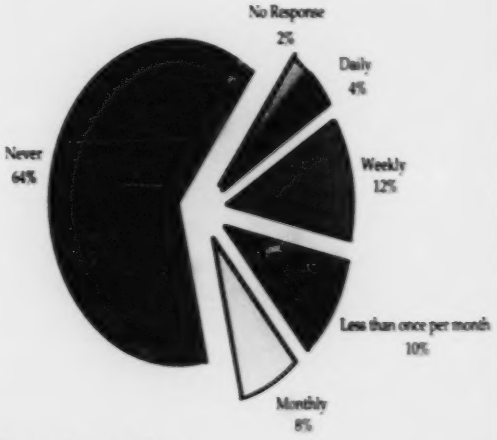
	Core Users (All With Disabilities)	Casual Users With Disabilities	Casual Users Without Disabilities
European American	76% (37)	71% (252)	53% (86)
Hispanic	2% (1)	2% (6)	1% (2)
African American	2% (1)	2% (9)	4% (6)
Native American	0% (0)	6% (21)	2% (4)
Asian American	12% (6)	1% (3)	24% (39)
Other	4% (2)	8% (28)	4% (6)
No response	4% (2)	10% (37)	12% (19)

Graph 11
Baseline Survey -- Core Users*
Use of e-mail and Internet
N = 49

How often do you use e-mail?



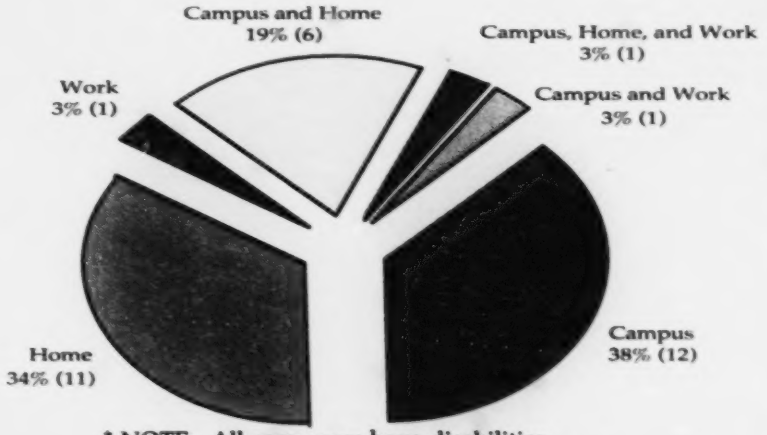
How often do you use the Internet?



* NOTE: All core users have disabilities.

The core users were most likely to access the Internet on campus (38%) or at home (34%); only 3 respondents had access to the Internet at work (see Graph 12).

Graph 12
Baseline Survey Respondents -- Core Users*
Where do you use the Internet?
N = 32



* NOTE: All core users have disabilities.

Careers On-Line reached casual users, career service providers, and employers who were fairly sophisticated users of e-mail and the Internet. In contrast to the core users, the casual users of Careers On-Line and the career service providers and employers who responded to the questionnaire were active e-mail and Internet users. This is not unexpected because one would anticipate that individuals already on the Net would more readily access a service such as Careers On-Line (see Table 3).

The respondents were asked where they use the Internet (see Table 4). Of those who responded to this question, most casual users with disabilities access the Internet from home (69%), most casual users without disabilities access the Internet from campus or home (31% and 26%); the career service providers access the Internet from campus, home, and work; and employers responding to the baseline survey were most likely to access the Internet from home or work (53% and 35%).

Careers On-Line was successful in reaching a disabled student population. The original proposal stated that Careers On-Line would serve students, especially those with disabilities. Most of the core users (80%) and one third of the casual users with disabilities were students. In addition, over half (59%) of the casual users without disabilities were students (see Table 5).

Table 3
Baseline Survey Respondents: Casual Users, Career Service Providers, and Employers
Use of e-mail and the Internet

	Casual Users with Disabilities		Casual Users Without Disabilities		Career Service Providers		Employers	
Number	356		162		120		17	
How often do you use e-mail?								
Daily	248	(70%)	122	(75%)	102	(85%)	9	(53%)
Weekly	70	(20%)	36	(22%)	14	(12%)	4	(24%)
Monthly	3	(1%)	2	(1%)	1	(1%)	1	(6%)
Less than once per month	17	(5%)	1	(1%)	1	(1%)	2	(12%)
Never	8	(2%)	0	(0%	1	(1%)	0	(0%)
No response	10	(3%)	1	(1%)	1	(1%)	1	(6%)
How often do you use the Internet?								
Daily	213	(60%)	96	(59%)	72	(60%)	9	(53%)
Weekly	106	(30%)	53	(33%)	43	(36%)	6	(35%
Monthly	11	(3%)	8	(5%)	0	(0%)	0	(0%)
Less than once per month	10	(3%)	3	(2%)	5	(4%)	2	(12%)
Never	7	(2%)	2	(1%)	0	(0%)	0	(0%)
No response	9	(3%)	0	(0%)	0	(0%)	0	(0%)

Table 4
Baseline Survey Respondents: Casual Users, Career Service Providers, and Employers
Use of e-mail and the Internet

	Casual Users With Disabilities	Casual Users Without Disabilities	Career Service Providers	Employers
Number Responding	346	156	114	17
Where do you use the Internet?				
Campus	24 (7%)	48 (31%)	12 (10%)	0 (0%)
Home	237 (69%)	40 (26%)	25 (22%)	9 (53%)
Work	18 (5%)	14 (9%)	33 (29%)	6 (35%)
Campus and home	27 (8%)	18 (11%)	8 (7%)	0 (0%)
Home and work	22 (6%)	17 (11%)	18 (16%)	2 (12%)
Campus and work	3 (1%)	8 (5%)	11 (10%)	0 (0%)
Campus, home, and work	9 (3%)	11 (7%)	7 (6%)	0 (0%)

Table 5
Baseline Survey Respondents
Student Status

	Core Users (All With Disabilities) N = 49	Casual Users With Disabilities N = 356	Casual Users Without Disabilities N = 162
Students	**39 (80%)**	**115 (32%)**	**95 (59%)**
First year in college	4 (8%)	11 (3%)	7 (4%)
Sophomore in college	3 (6%)	9 (3%)	3 (2%)
Junior in college	4 (8%)	7 (2%)	8 (5%)
Senior in college	17 (35%)	25 (7%)	31 (19%)
Graduate/professional	8 (16%)	44 (12%)	36 (22%)
Extension or non-degree	3 (6%)	8 (2%)	6 (4%)
Other	0 (0%)	11 (3%)	4 (2%)
Not a student	**9 (18%)**	**195 (55%)**	**46 (28%)**
No response	**1 (2%)**	**46 (13%)**	**21 (13%)**

Careers On-Line reached many who were looking for work or who were working in part-time positions. Another key target population were individuals who were seeking employment. The baseline survey data indicate that 37% of the core users, 53% of the casual users with disabilities, and 27% of the casual users without disabilities were looking for work. In addition, 7 core users, 24 casual users with disabilities, and 27 casual users without disabilities were employed for less than 36 hours (see Table 6).

Table 6
Baseline Survey Respondents
Employment Status
N = 567

	Core Users (All With Disabilities) N = 49	Casual Users With Disabilities N = 356	Casual Users Without Disabilities N = 162
Looking for Work	**18 (37%)**	**187 (53%)**	**44 (27%)**
Working in Paid Position	**15 (31%)**	**84 (24%)**	**83 (51%)**
1-5 hours	1 (7%)	0 (0%)	1 (1%)
6-10 hours	2 (13%)	4 (5%)	5 (6%)
11-15 hours	1 (7%)	3 (4%)	6 (7%)
16-20 hours	2 (13%)	9 (11%)	10 (12%)
21-25 hours	0 (0%)	0 (0%)	3 (4%)
26-30 hours	0 (0%)	6 (7%)	2 (2%)
31-35 hours	1 (7%)	2 (2%)	0 (0%)
36-40 hours	6 (40%)	24 (29%)	30 (36%)
41+ hours	0 (0%)	1 (1%)	2 (2%)
No response	2 (13%)	35 (42%)	24 (29%)

Connections with disability counselors and the national disability community maximized Careers On-Line use by core and casual users. Careers On-Line staff provided training and information to a number of disability counselors. Data from the baseline survey indicate that most core users (22) found out about Careers On-Line services from their counselors. Data from casual users with disabilities indicate that most became familiar with Careers On-Line services when using the Internet (see Table 7).

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Table 7 How Core and Casual Users Learned about Careers On-Line			
	Core Users (All With Disabilities) N = 49*	**Casual Users With Disabilities** N = 356*	**Casual Users Without Disabilities** N = 162*
Referred from Career Connections	10 (20%)	4 (1%)	5 (3%)
COL Brochure	1 (2%)	11 (3%)	4 (3%)
DS Dispatch	2 (4%)	5 (1%)	0 (0%)
CC News	3 (6%)	3 (1%)	2 (1%)
Referred by counselor	22 (45%)	6 (2%)	0 (0%)
Friend	6 (12%)	16 (5%)	7 (4%)
Seminar	1 (2%)	2 (1%)	2 (1%)
Other sources	15 (31%)	28 (8%)	14 (9%)
Internet	0 (0%)	318 (89%)	145 (90%)
Minnesota Daily	0 (0%)	2 (1%)	1 (1%)
Great Lakes Brochure	0 (0%)	0 (0%)	1 (1%)
*Percentages do not equal 100% because respondents could check more than one option			

Of the 57 core and casual respondents who chose the category "Other", 9 learned about Careers On-Line from specific individuals, 19 from specific Internet sites, 12 from publications such as *Handicapped Digest*, 10 from organizations such as "Do-It Foundation", 4 from the Career Fair or GradFest events, 1 from a radio show, 1 from an internal electronic bulletin board, 1 as a member of a Careers On-Line focus group, and 1 had used Careers On-Line as an undergraduate.

Baseline survey data from the career service providers and employers indicate that most learned about Careers On-Line during their use of the Internet (see Table 8).

Table 8 How Career Service Providers and Employers Learned about Careers On-Line		
	Career Service Providers N = 120*	Employers N = 17*
Referred from Career Connections	3 (2%)	
COL Brochure	2 (2%)	
CC News	1 (1%)	
Counselor	1 (1%)	1 (6%)
Friend	10 (8%)	
Seminar	6 (5%)	
Other sources	14 (12%)	3 (18%)
Internet	93 (77%)	14 (82%)
* Percentages do not equal 100% because respondents could check more than one option.		

Careers On-Line reached users searching for employment opportunities and information on job accommodations, adaptive technology, and disability services. In general, users who responded to the baseline survey and who visited the Careers On-Line Web or Gopher sites were looking for information made available through Careers On-Line. This may indicate that the search words used to advertise Careers On-Line services through various search engines and the hot button linkages established with other Web sites are effective in connecting users who will most benefit from information provided at the Web or Gopher sites (see Table 9).

Table 9
What did you hope to gain from Careers On-Line?

Category	Core Users (All With Disabilities)	Casual With Disabilities	Casual Without Disabilities	Career Service Providers	Employer
Part-time job leads*	19 (39%)	163 (46%)	22 (14%)	NA	NA
Full-time job leads*	27 (55%)	252 (71%)	134 (83%)	NA	NA
Internship leads*	18 (37%)	76 (21%)	25 (15%)	NA	NA
Co-op leads*	3 (6%)	43 (12%)	7 (4%)	NA	NA
Mentors	16 (33%)	79 (22%)	21 (13%)	NA	NA
Informational interview	15 (31%)	82 (23%)	33 (20%)	NA	NA
Job shadowing	8 (16%)	46 (13%)	17 (10%)	NA	NA
Job leads for clients*	NA	NA	NA	73 (61%)	12 (71%)
Job accommodations information*	15 (31%)	132 (37%)	39 (24%)	68 (57%)	7 (41%)
Adaptive technology information*	26 (53%)	84 (24%)	21 (13%)	59 (49%)	6 (35%)
Information about U of MN Disability Services*	13 (27%)	188 (53%)	19 (12%)	72 (60%)	5 (29%)
Other information	11 (22%)	60 (17%)	8 (5%)	28 (23%)	3 (18%)

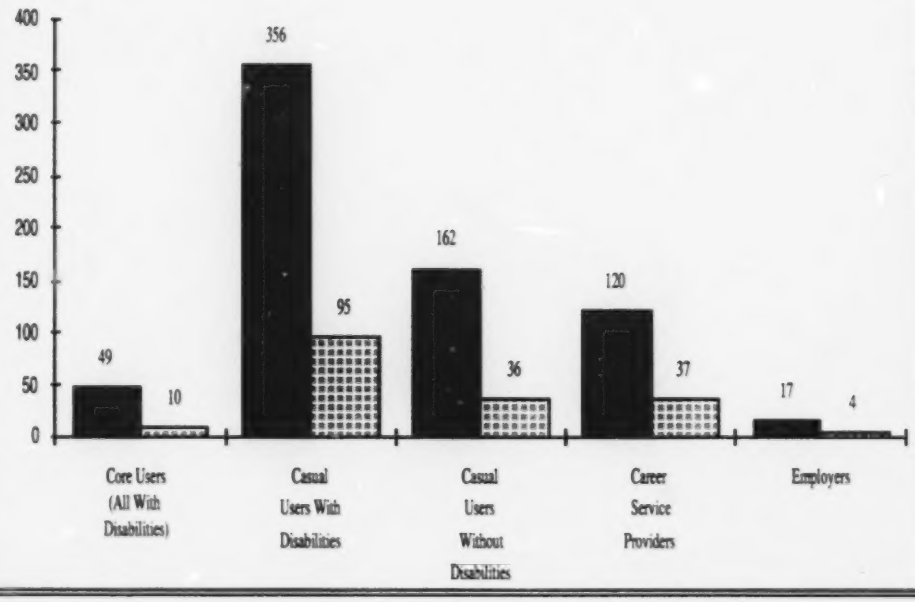
* These are primary services of Careers On-Line. The other services listed were not available through the Web or Gopher sites at the time of the survey.

Initial Satisfaction with Careers On-Line and Short-Term Outcomes
Three-Week Follow-up Survey Results

A three-week follow-up survey was used to determine user satisfaction with Careers On-Line and to identify short-term outcomes which may have occurred as a result of using Careers On-Line services. This time interval was chosen because staff felt that on-line users would have a recent memory of using Careers On-Line and therefore be likely to be able to answer questions regarding satisfaction with the service and outcomes. There was concern about possible memory loss if surveys were sent out later.

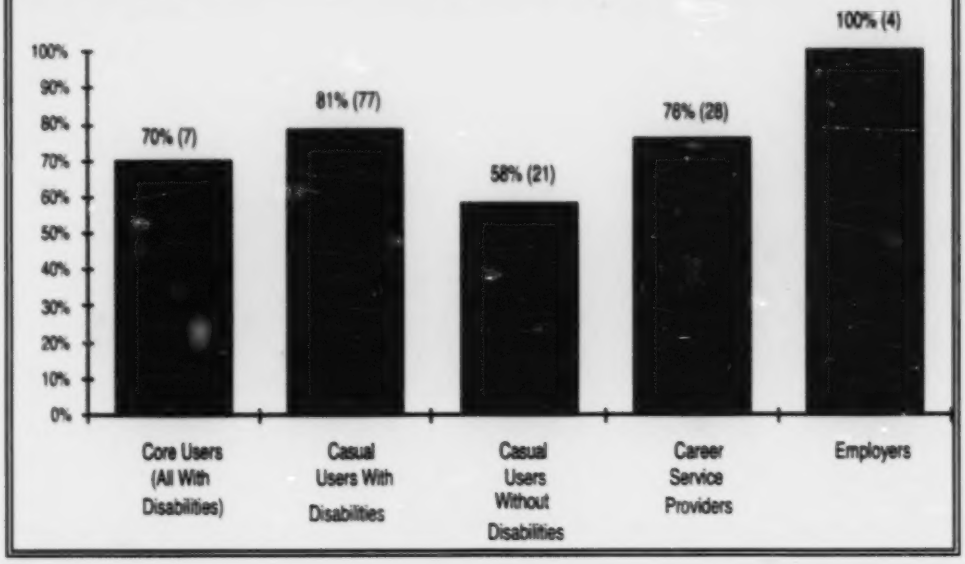
The response rate to the three-week follow-up survey was low but should not be generalized to all users, because the results should be seen as giving accurate information for those responding (see Graph 13).

Graph 13
Baseline Survey versus Three-Week Follow-up Survey
Response Rates



Data from the three-week follow-up survey indicate that most users had visited the Careers On-Line Web or Gopher sites only once (see Graph 14).

Graph 14
Number of Users Who Visited the Careers On-Line Sites Only Once



The number of times respondents to the three-week survey used Careers On-Line ranged from one time to more than ten times (see Table 10).

Table 10
How many times have you used Careers On-Line?

Category	Core Users (All With Disabilities)	Casual With Disabilities	Casual Without Disabilities	Career Service Providers	Employer
Number	10	95	36	37	4
Once	7*	77*	21*	23*	4
Twice	0	9	9	7	0
3-5 times	3	6	1	4	0
6-10 times	0	1	1	3	0
More than 10 times	0	2	3	0	0
No response	0	0	1	0	0

* Extrapolated based on responses to questions: "Have you used Careers On-Line since the last survey?" and "How many times have you used Careers On-Line."

Respondents to the three-week survey had used Careers On-Line ranging from the last week to "more than 7 months ago." A number users completed the survey more than three weeks after first using Careers On-Line because (a) there was an initial delay in sending out the three-week follow-up survey, and (b) users could use the services before filling out the survey and thus would receive the survey more than 3 weeks from initial use. Most respondents accessed Careers On-Line within the last week, within the last month, or 1 to 3 months ago. This may indicate recent exposure to the services, enabling respondents to provide a valid assessment (see Table 11).

Table 11
When was the last time you used Careers On-Line?

Category	Core Users (All With Disabilities)	Casual Users With Disabilities	Casual Users Without Disabilities	Career Service Providers	Employer
Number	**10**	**95**	**36**	**37**	**4**
Within the last week	1 (10%)	9 (9%)	6 (17%)	6 (16%)	0 (0%)
Within the last month	1 (10%)	40 (42%)	17 (47%)	20 (54%)	1 (25%)
1-3 months ago	2 (20%)	14 (15%)	9 (25%)	0 (0%)	0 (0%)
3-5 months ago	0 (0%)	0 (0%)	0 (0%)	7 (19%)	1 (25%)
5-7 months ago	1 (1%)	0 (0%)	0 (0%)	1 (3%)	0 (0%)
More than 7 months ago	3 (30%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
No response	2 (20%)	32 (34%)	4 (11%)	3 (3%)	2 (50%)

Comparison Between Respondents to Baseline Survey and Three-Week Follow-up Survey

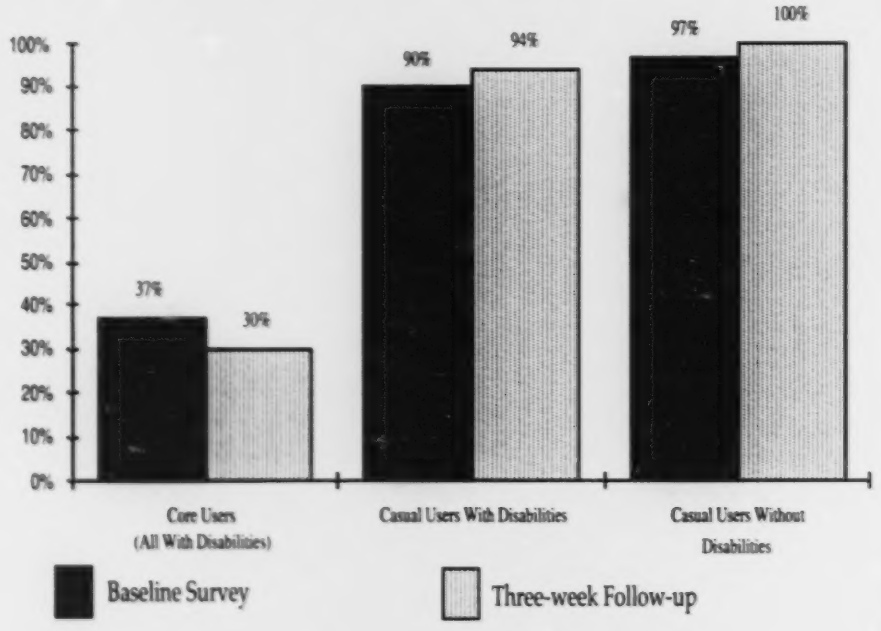
Survey researchers (such as Borg and Gall, 1989 and Fowler, 1988) suggest that the evaluation determine how the respondents to questionnaires gathered over time may differ. Data were available regarding disabilities; status such as student, career service provider or employer; gender; ethnic background; employment status, and why they came to Careers On-Line. Table 12 indicates that the percentages differed little between the baseline and three-week follow-up surveys on these dimensions. Most survey researchers would suggest that this lack of difference will mean that the conclusions drawn for the three-week follow-up survey may be generalized to the baseline survey respondents (see Borg and Gall 1989 or Fowler 1988).

Table 12
Comparison Between Respondents to the Baseline Survey and the Three-Week Follow-up Survey

	Baseline	3-Week
Number	704	182
Disabilities	63%	58%
Student and/or job seeker	81%	78%
Career Service Provider	17%	20%
Employer	2%	2%
Gender: Male	58%	62%
Ethnic Background: White	67%	76%
Employment Status: Working in a paid position	41%	30%
Looking for part-time leads	29%	32%
Looking for full-time leads	59%	59%
Looking for internship leads	17%	19%
Looking for information about job accommodation	26%	25%
Looking for information about adaptive technology	19%	18%
Looking for information about disability services	31%	35%

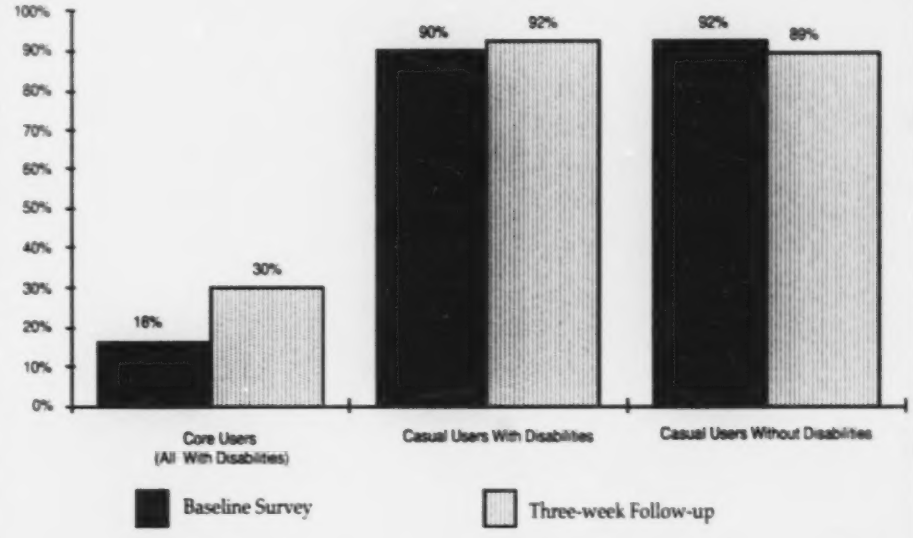
In general, users responding to the baseline survey did not differ from those responding to the follow-up survey regarding their use of e-mail on a daily or weekly basis (see Graph 15).

Graph 15
Baseline Survey versus Three-Week Follow-up Survey
How often do you use e-mail?
Percentage Responding Daily or Weekly



The casual users responding to the baseline survey did not differ from those responding to the follow-up survey regarding use of the Internet; however, there was a 14% increase in the core users who responded that they used the Internet "daily" or "weekly" (see Graph 16).

Graph 16
Baseline Survey versus Three-Week Follow-up Survey
How often do you use the Internet?
Percentage Responding Daily or Weekly



Satisfaction: Core & Casual Users

Many users were satisfied with the services provided through Careers On-Line. Respondents were asked, "What is your overall satisfaction with Careers On-Line?" Only 74 (52%) of the core and casual users responded to this question. Of these, 43% were satisfied with the services (see Table 13).

Table 13
Three-Week Follow-up Respondents
Satisfaction with Careers On-Line

	Not Satisfied (1 or 2)	Neutral (3)	Satisfied (4 or 5)
Overall Satisfaction Rating	15 (20%)	27 (36%)	32 (43%)

The majority of respondents looking for part-time job leads, co-op leads, contacts for job shadowing, information about job accommodations, and information about disabilities were satisfied with Careers On-line. Data from two separate questions were analyzed to determine satisfaction with Careers On-Line services. The first was, "What did you hope to gain from Careers On-Line services?" and the second, "What was your overall satisfaction with Careers On-Line?" At least 50% of the respondents who were looking for part-time job leads (54%), co-op leads (55%), contacts for job shadowing (54%), information about job accommodations (64%), and information about disabilities (57%) reported being "Satisfied" (4 or 5 on a five-point scale) with Careers On-Line (see Table 14).

Table 14
Three-Week Follow-up Respondents
Overall Satisfaction with Careers On-Line
Broken Down by Specific User Need

Overall satisfaction by those:	Not Satisfied (1 or 2)	Neutral (3)	Satisfied (4 or 5)
Looking for full-time job leads	11	23	26 (43%)
Looking for part-time job leads	3	9	14 (54%)
Looking for internship leads	3	8	7 (39%)
Looking for co-op leads	0	4	5 (55%)
Looking for mentor contacts	2	7	8 (47%)
Looking for contacts for information	3	9	8 (40%)
Looking for contacts for job shadowing	2	4	7 (54%)
Looking for information about job accommodations	5	3	14 (64%)
Looking for information about adaptive technology	5	4	8 (47%)
Looking for information about disability	6	7	17 (57%)

Respondents were more satisfied with the Careers On-Line job postings than with other job posting services. Three-week follow-up respondents rated the job posting services provided by Careers On-Line higher (average 3.10) than other job posting services (2.85). This may indicate that although satisfaction with Careers On-

Line services in general and with the job posting services specifically is lower than desired by project staff, Careers On-Line may be providing a higher quality service than found elsewhere on the Internet (see Table 15).

Table 15
Three-Week Follow-up Respondents
Satisfaction with Careers On-Line job postings

	Not Satisfied (1 or 2)	Neutral (3)	Satisfied (4 or 5)
Overall satisfaction with Careers On-Line job postings	20	23	28 (40% of users)
Overall satisfaction with other job posting services	22	16	17 (31% of users)

Users looking for full-time jobs and information about disabilities were more satisfied with the Careers On-Line job postings than those who were looking for other information. Although the results were relatively similar, the users who came to Careers On-Line looking for full-time jobs and information about disabilities were more satisfied with the job posting database (see Table 16).

Table 16
Three-Week Follow-up Respondents
Satisfaction with Careers On-Line Job Postings Broken Down by Specific User Needs

Overall satisfaction rating by those:	Not Satisfied (1 or 2)	Neutral (3)	Satisfied (4 or 5)
Looking for part-time jobs	6	9	7 (32%)
Looking for full-time job leads	16	20	21 (37%)
Looking for internship leads	5	6	6 (35%)
Looking for information about adaptive technology	6	4	4 (29%)
Looking for information about disability	10	6	12 (43%)

The majority of users were satisfied with the Careers On-Line adaptive technology products and resources database. The majority of core and casual users were satisfied with the adaptive technology database (58%). Similarly, 57% of users coming to the Careers On-Line site looking specifically for adaptive technology information were satisfied with the adaptive technology products and resources database (see Table 17).

Table 17
Three-Week Follow-up Respondents
Satisfaction with Adaptive Technology Products and Resources Database

	Not Satisfied (1 or 2)	Neutral (3)	Satisfied (4 or 5)
General rating of satisfaction with adaptive technology database	6	11	24 (58% of all users)
Satisfaction rating of the Careers On-Line adaptive technology database for those users looking for information about adaptive technology	2	4	8 (57% of users looking for this info)

Users were satisfied with the resume information database. The majority of users (59%) were satisfied with the information provided in the resume information database. Although at least 50% of the users in all categories gave it a rating of 4 or 5 (on a five-point scale), users who came to Careers On-Line looking for information about adaptive technology and information about disabilities were the most satisfied (see Table 18).

Table 18
Three-Week Follow-up Respondents
Satisfaction with Resume Information Database

	Not Satisfied (1 or 2)	Neutral (3)	Satisfied (4 or 5)
Overall satisfaction with resume information database	6	7	19 (59%)
Overall satisfaction rating by those:			
Looking for full-time leads	4	7	14 (56%)
Looking for informational interviews	1	2	3 (50%)
Looking for information about adaptive technology	1	1	7 (78%)
Looking for information about disability	2	0	11 (85%)

Although 11 of the three-week follow-up core/casual users were looking for job accommodation information and reported finding it through Careers On-Line, only four users completed the satisfaction question. Two users were not satisfied with the job accommodation information database, giving it a 1 or 2, and two other users were satisfied with the information and rated it 4 or 5 (see Table 19).

Table 19
Three-Week Follow-up Respondents
Satisfaction with Job Accommodation Information Database

	Not Satisfied (1 or 2)	Neutral (3)	Satisfied (4 or 5)
Overall satisfaction with job accommodation handbook	2	0	2

The majority of users were satisfied with the career and educational planning resources. Sixteen (53%) of the users were satisfied with the career resources and at least 50% of the users coming to Careers On-Line for a variety of reasons gave the career resources a favorable rating (see Table 20).

Table 20
Three-Week Follow-up Respondents
Satisfaction with Career and Educational Planning Resources Database

	Not Satisfied (1 or 2)	Neutral (3)	Satisfied (4 or 5)
Overall satisfaction with career and educational planning resources	9	5	16 (53%)
Overall satisfaction rating by those:			
Looking for contacts for mentors	4	0	4 (50%)
Looking for informational interviews	2	1	4 (57%)
Looking for information for job shadowing	1	0	2 (67%)
Looking for information about job accommodations	3	1	5 (55%)

Satisfaction: Career Service Providers and Employers

Only 37 of the 120 career service providers and 4 of the 17 employers responded to the follow-up survey. The conclusions drawn should be viewed as reflecting the opinions of those who responded but not generalized to all career service providers or employers using Careers On-Line.

Career service providers were most satisfied with the information regarding adaptive technology, other job posting services, and career and educational planning resources. Although the numbers responding were very low, satisfaction with the various databases ranged from 43% to 80%. Career service providers were most satisfied with the information on adaptive technology, other job postings, resumes, and career resources (see Table 21).

Table 21
Three-Week Follow-up Respondents
Career Service Providers' Satisfaction*

	Not Satisfied (1 or 2)	Neutral (3)	Satisfied (4 or 5)
Overall satisfaction with Careers On-Line	2	9	9 (45%)
Satisfaction with adaptive technology	1	2	4 (57%)
Satisfaction with Careers On-Line job postings	4	8	9 (43%)
Satisfaction with other job postings	0	3	4 (57%)
Satisfaction with resume information	0	1	3 (75%)
Satisfaction with job accommodation handbook	None Responded	None Responded	None Responded
Satisfaction with career and educational planning resources	0	1	4 80%

* No employers responded to these items.

Satisfaction: Ways to Improve Careers On-Line

Project staff were interested in learning how the Careers On-Line services could be improved. Users were asked to list any problems they had with using Careers On-Line. Some users wanted more job listings included, others wanted more variety in the types of jobs listed, some users had technical difficulties when attempting to use the service, other users had technical difficulties when trying to complete the baseline survey, and one offered an editorial comment regarding the Americans with Disabilities Act. Careers On-Line staff used these comments

throughout the project to improve the services provided. Below are representative responses:

Limited Number/Type of Job Listings

I don't believe the listings are comprehensive enough. It seems the compilers could be more aggressive and comprehensive in their work.

Didn't provide any assistance to disabled persons who are home-confined. Adaptive technology is there, but adaptive technology problems are easy to solve. What's difficult is identifying what career options there are and how to find work.

Limited pool of job postings in my field.

Technological Difficulties

Only server difficulties.

I only know how to access it at the U.

It's frustrating not having my own e-mail address outside my agency and I truly don't know how to generate one.

Slow computer.

The whole idea of Internet confuses me. I am not a technologically inclined person.

Accessing JAN.

I find it difficult to work my way through menus and access services.

Returned resumes due to the following: do not accept faxes, improper paper, improper format. Can be resolved by publishing exactly what is expected or wanted! Instructions on how to accomplish certain tasks on the Internet (e.g. block copying text) would be extremely helpful to the novice user.

I am unsure how to access the On-line again -- I stumbled across it the first time. (2 additional similar comments

I don't know how to use your service. (3 additional similar comments)

Survey Difficulties

None, but I also have not had any contact except for this survey!

Thank you for sending this e-mail. I filled out the survey at your Web site, but clicking the "submit" button failed to send it. I also noticed that the little round "yes" or "no" choices did not work. Thanks for your Web site!

Other Responses

I reside out of state but have heard some positive things concerning the job market in Minneapolis. Employers are not necessarily impressed with the Americans with Disabilities Act due to political conservatism and by claiming applicants are not qualified.

When asked how Careers On-Line could improve its services, users offered suggestions regarding the expansion of jobs listed, wanting more personal and technical assistance, and a collection of other advice. Again, Careers On-Line staff used these comments to improve on-line services.

Responses Regarding Job Listings

Put those job ads from Sunday issue of the most popular newspaper into the database.

Provide information and services to home-confined persons with help on how business employment connections can be found.

I would like to see more information on psychological disabilities and the accommodations that are possible/desired for helping people in the work place.

More listings for college students in desired fields.

More local listings, more diversified listings. (1 additional similar comment)

Include disabled students and employers willing to consider them/us.

Perhaps a more detailed breakdown of types of jobs. I don't like to waste time reading about jobs of no interest to me.

More listings in diversified areas. (2 additional similar comment)

If I remember (I haven't been on for awhile) you don't go by areas and there are not enough at home computer jobs.

Try to get more job listings outside of your area. (2 additional similar comment)

Need to expand more job openings. (1 additional similar comment)

Give More Personalized and More Technical Assistance

More of the personal touch would be nice.

Help me find a job (part-time, full-time whatever).

Make it more user friendly.

Improve on-line communications. (1 additional similar comment)

Send directions on how to use it a lot sooner after someone has joined.

Tell me how to use the service. (1 additional similar comment)

How to sub-classify the key word search.

Other

Send info.

Higher education is, to me, quite disappointing in not having adequately addressed the issues of 1) corporate downsizing, 2) economic problems of both the inner cities and rural communities, 3) employment barriers/difficulties of disabled citizens.

Let me try the service again.

Just continue doing what you're doing.

Maybe I didn't get that far, but if you compiled a database of references to individual HTML resumes, categorized ala Yahoo, I think that might help a lot of us.

Better access to e-mail (i.e. home).

Keep going!

Do you advertise job/internships for hearing people who want to work or learn about the deaf community? If so, may I have an application and/or information about those opportunities?

Short-Term Outcomes: Core and Casual Users

Careers On-Line helped core and casual users connect with other resources. At its Web site, Careers On-Line gave users information regarding other career and job posting resources. For example, users were told about the University of Minnesota's Career Connections program. Linkages through electronic hot buttons enabled the Careers On-Line user to connect with *The Catapult, America's Job Bank, Best Bets from the Net, Business Job Finder, Career Mosaic, Employment Opportunities at Cray Research, Internet Job Surfers, JAN, FedJobs, JobWeb, Mayo Online Career Center, Monster Board, and OnLine Career Center.* At these Internet sites, users could access thousands of job postings and employers. Three-week follow-up respondents were asked if they "learned about" and/or "used" Career Connections, *OnLine Career Center, JAN, FedJobs, Career Mosaic, JobWeb,* and other career services. The data indicate that a number of users learned about or used these resources as a result of Careers On-Line (see Table 22).

Table 22
Three-Week Follow-up Respondents: Core and Casual Users
Learned About and/or Used Various Resources

Did you learn about and/or use:	Number	Learned about	Used
Career Connections	42	29 (69%)	10 (24%)
OnLine Career Center	53	29 (55%)	19 (36%)
JAN	36	29 (81%)	3 (8%)
FedJobs	44	26 (59%)	15 (34%)
Career Mosaic	37	14 (38%)	18 (49%)
JobWeb	37	23 (62%)	10 (27%)
Other career services	10	4 (40%)	6 (60%)

Careers On-Line helped users obtain information on disability services. In the follow-up survey, 12 users indicated that they were seeking information on disability services when they visited the Careers On-Line site. Of these, 8 (67%) found information.

There was a slight increase in the frequency with which matched pairs of core users used e-mail and the Internet. Careers On-Line hoped to help core users learn about and use e-mail and the Internet. Data from core users who responded to both the Baseline Survey and the Three-Week Follow-up Survey were analyzed. Although not statistically significant, core users who responded to both the baseline survey and three-week follow-up survey increased the frequency with which they used e-mail and the Internet (see Table 23).

Table 23
Core Users who Responded to Both the Baseline Survey and Three-Week Follow-up Survey
N = 10

	Number of Matched Pairs	Pre Mean	Post Mean	Change
How often do you use e-mail?	10	3.4	3.8	+.4
How often do you use the Internet?	10	3.5	3.9	+.4

Users obtained information because of Careers On-Line. Given that only 60 of the core and casual users responding to the three-week follow-up survey and 22 of the users responding to the six-month follow-up survey were looking for jobs, the question became, "what did users gain from Careers On-Line?" Responses to open-ended questions indicate that many obtained career resource information, technology information, new information, and information regarding resources available for personal use or to share with students. Others had yet to benefit from using Careers On-Line but believed it would help them in the future. A few had special needs so did not anticipate that Careers On-Line would be helpful while one was "just browsing" on the Net. Selected comments are categorized and listed as follows:

Obtained Career Resource and Job Lead Information

[I] was trained to use Careers On-Line and had help with updating my resume. Was employed shortly after so didn't need it anymore.

It is another resource for searching out leads. It gives me the added power of the Internet.

It provides me with another alternative for job searching.

Basically I was looking for job postings, and Careers On-Line showed some postings. But I am still hunting that.

Another useful tool for information and links. (2 additional similar comments)

Made me aware of the different avenues of help offered.

It gave me enough demographic regional information to help me decide on a career change and to research job opportunities in a region.
How to get started seeking employment.
Passed info on to our career counselor.
Opened my eyes to possible job/internship opportunities.

Obtained Technology Information
Resources for [vocational]/technology.
Mainly in the adaptive equipment area.

Obtained Information Regarding Assistance Available
Increased knowledge of assistance available.
Making me aware of disability related resources.

Obtained New Insights
I was much better informed about accommodations for psychological disabilities when I had my first contact with Voc. Rehab.
At this time, more than anything, Careers On-Line has convinced me that using the Internet for job lead development is not only easy, it's necessary! Thank you for making your services available for career counselors and job developers.

Anything Is Helpful
Any information is helpful during a job search.
It is very accessible and I can virtually get any kind of information that I need.

Careers On-Line Has Potential for Benefit in Future
I haven't given Careers On-Line a fair chance yet. I haven't seen anything close to what I'm qualified to do (newspaper press operator /supervisor).
I could save lots of time by browsing around.
Know it exists-gives me a "little" idea of what kinds of jobs are out there.
When I graduate from OSU, I believe it will help me find a career professional position.
First, by discovering that such a service is available, am planning a serious search.
Not yet, but I plan to use it soon.
Didn't really use enough to really say. I am excited that this kind of service is being developed and may be available for persons who may be isolated by geography or physical challenge.
Great Idea - hope it works! I like the way I can search, easily, in a variety of places.
Great resource!

Doesn't Have What I Need because of Interest or Location
It hasn't really. The type of job I am looking for probably won't be posted over the Internet.

I'm not sure it will benefit me as I hope to use it at work when I'm hooked up to the Internet! I'm a K-12 counselor on a small island off the coast of RI.

Can't find very many job listings/have limited time for Careers On-Line -will be trying again in May.

Not sure how to find what I need. The day I looked for positions, not many available in my field. I am looking for graduate research assistantships.

Just Browsing

Was familiarizing myself with electronic resources that are available. This was one of them. (2 additional similar comments)

Have not had much contact with Careers On-Line.

Have just discovered your site. Keep up the good work!

Was cruising, saw your service and checked in-I work in the field of disability planning, prevention and research.

Short-Term Outcomes: Career Service Providers and Employers

Some career service providers and employers linked with other Internet job services because of Careers On-Line. As mentioned before, linkages through electronic hot buttons enabled the Careers On-Line user to connect with other Internet sites such as *Career Mosaic*. The data available from career service providers and employers show that a few learned about and/or used other Internet services because of Careers On-Line (see Table 24).

Table 24
Three-Week Follow-up Respondents: Career Service Providers & Employers
Learned About and/or Used Various Resources

Did you learn about and/or use:	Number	Learned About	Used	Learned about and used
Career Connections	11 CSPs 0 Emp.	6 (55%)	5 (45%)	0 (0%)
On-line Career Center	13 CSPs 3 Emp	10 (62%)	5 (31%)	1 (6%)
JAN	13 CSPs 1 Emp	11 (79%)	3 (21%)	0 (0%)
FedJobs	11 CSPs 0 Emp	8 (73%)	3 (27%)	0 (0%)
Career Mosaic	10 CSPs 0 Emp	4 (40%)	6 (60%)	0 (0%)
JobWeb	13 CSPs 0 Emp	5 (38%)	7 (54%)	1 (8%)
Other career services	4 CSPs 0 Emp	3 (75%)	0 (0%)	1 (25%)

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Four career service providers gave the following examples of ways Careers On-Line helped them serve their clients:

Have not had the time of late to keep up with all the offerings, but would like to see the service continue and to monitor it to enhance my ability to work with my disabled clients.
Helped with one-to-one counseling.
It's another resource I can use to help my disabled clients in finding jobs.
It really gives me another tool in helping people find and locate possible jobs.

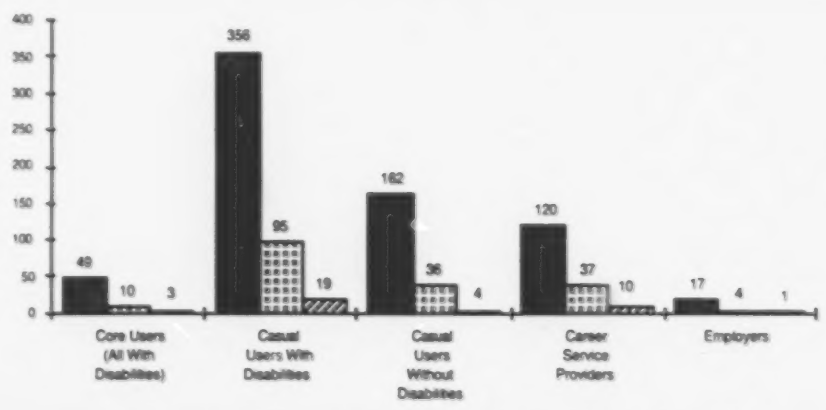
One employer respondent offered these comments, "I am just recently getting to use the Internet (and therefore your service) for my business. So far it seems that most services like yours work well for professional or computer personnel but not for everyday type of jobs (mechanic, pharmacy tech, medical assistant) but I have figured out what works for me. Thank you for reminding me about you. I will use your service more often."

Long-Term Satisfaction and Long-Term Outcomes:
Six-Month Follow-up Survey Results:

There was concern that surveying users at the end of three weeks would not allow for documenting longer-term outcomes, such as if a user applied for jobs listed on the Careers On-Line Web site, interviewed for such jobs, and obtained a position. It also was believed that users might be better able to give satisfaction ratings to the services after they had time to reflect and to use information from the site. Therefore, a six-month follow-up questionnaire was developed to examine longer-term outcomes.

The response rate for the six-month follow-up survey was very low (see Graph 17).

Graph 17
Baseline Survey versus Three-Week Follow-up Survey versus Six-Month Follow-up Survey
Response Rates



Comparison Between Respondents to Various Surveys

As mentioned earlier, it is important to determine how the respondents to questionnaires gathered over time may differ. Data were available regarding disabilities; status such as student, career service provider or employer; gender; ethnic background; employment status; and why they came to Careers On-Line. As can be seen in Table 25, there were few differences in the percentages for each of these categories. Most survey researchers would suggest that this lack of difference will mean that the conclusions drawn for the six-month follow-up survey may be generalized to the three-week and baseline survey populations (see Borg and Gall, 1989 or Fowler, 1988).

A finding that merits explanation is that the number of respondents who were employed actually decreased over the period. One plausible explanation is that respondents to the earlier surveys graduated, became employed and no longer had their school e-mail account, meaning that staff would not be able to contact them. Another explanation may be that once users became employed they no longer had a vested interest in using Careers On-Line and therefore did not respond. The users who were still using Careers On-Line may have been the ones who were not able to find employment. Finally, the earlier versions of the follow-up survey had a question which automatically eliminated those who had obtained jobs. This problem was corrected in later versions of the survey.

Table 25
Comparison Between Respondents to the Baseline Survey, the Three-Week Follow-up Survey, and the Six-Month Follow-up Survey

	Baseline	3-Week	6-Month
Number	704	182	37
Disabilities	63%	58%	59%
Student and/or job seeker	81%	78%	70%
Career Service Provider	17%	20%	27%
Employer	2%	2%	3%
Gender: Male	58%	62%	65%
Ethnic Background: White	67%	76%	86%
Employment Status: Working in a paid position	41%	30%	17%
Looking for part-time leads	29%	32%	30%
Looking for full-time leads	59%	59%	51%
Looking for internship leads	17%	19%	16%
Looking for information about job accommodation	26%	25%	16%
Looking for information about adaptive technology	19%	18%	22%
Looking for information about disability services	31%	35%	32%

Unlike that reported in the three-week survey, most users who responded to the six-month survey visited the Careers On-Line site more than once so they may be in a better position to offer feedback regarding outcomes and satisfaction (see Table 26).

The time period since respondents to the six-month survey last used Careers On-Line ranged from within the last week to "more than 7 months ago." The responses were fairly evenly distributed throughout this time period for the core and casual users and the career service providers. This may confound the data in that the respondents had experiences with Careers On-Line over a broad time period and the Careers On-Line Web site was constantly upgraded. Therefore, the users responding to the six-month survey may have been rating different "objects", making interpretation of subsequent data further limited. An additional complication is that only 7 (27%) of the core/casual users and 4 (40%) of the career service providers who responded to the survey had used Careers On-Line since answering the three-week follow-up survey (see Table 27).

Table 26
How many times have you used Careers On-Line?

Category	Core and Casual Users	Career Service Providers	Employer
Number	26	10	1
Once	4 (15%)	2 (20%)	1 (100%)
Twice	8 (31%)	2 (20%)	0 (0%)
3-5 times	11 (42%)	3 (30%)	0 (0%)
6-10 times	2 (8%)	1 (10%)	0 (0%)
More than 10 times	1 (4%)	1 (10%)	0 (0%)
No response	0 (0%)	1 (10%)	0 (0%)

Table 27
When was the last time you used Careers On-Line?

Category	Core and Casual Users	Career Service Providers	Employer
Number	26	10	1
Within last week	4 (15%)	1 (10%)	1 (100%)
Within last month	1 (4%)	2 (20%)	0 (0%)
2-3 months ago	9 (35%)	1 (10%)	0 (0%)
4-5 months ago	6 (23%)	4 (40%)	0 (0%)
6-7 months ago	4 (15%)	1 (10%)	0 (0%)
More than 7 months ago	2 (8%)	1 (10%)	0 (0%)
No response	0 (0%)	1 (10%)	0 (0%)

Long-Term Satisfaction

The satisfaction data for the six-month follow-up respondents are mixed. If respondents to the six-month follow-up survey had not used Careers On-Line since the three-week follow-up they were instructed to not respond to the survey items dealing with satisfaction. Therefore, data regarding satisfaction and outcomes is further reduced and should be interpreted with caution. As can be seen in Table 28, the data are mixed; the largest percentage of users were satisfied (ratings of 4 or 5) with Careers On-Line "overall," with the adaptive technology products and resources provided by Careers On-Line, and with the Careers On-Line job postings.

Table 28
Six-Month Follow-up Satisfaction Ratings

Satisfaction with:	Core and Casual Users		Career Service Providers	
	Number of Respondents	Number Satisfied 4 or 5 rating	Number of Respondents	Number Satisfied 4 or 5 rating
Careers On-Line (overall)	5	3	4	2
Careers On-Line adaptive technology information	3	2	2	2
Careers On-Line job postings	5	2	3	1
Other job posting services	3	0	1	0
Careers On-Line resume information	2	2	0	0
Careers On-Line job accommodation handbook	1	0	2	2
Careers On-Line career development resources	2	0	0	0
Other Careers On-Line services	1	0	0	0

When asked how Careers On-Line could be improved, core and casual users and career service providers tended to suggest expanding the job information. Three core users wanted more technical assistance.

> *Please add telework listing to job postings. Telework is contract work done by computer from a remote location and e-mailed to employer. (Core/Casual User)*

Obtain a wider base, be more aggressive in recruiting posting. (Core/Casual User)

Expand the job information. (Career Service Provider)

Expand the job listing service. A more intuitive menu of services offered would make users more aware of the different services you offer. I'm sorry, but I wasn't aware of all the options on this page. I will check out the adaptive and disabled areas. (Career Service Provider)

When I need to know something I tend to call and ask rather than go on-line. I've been very satisfied with the services I've gotten over the phone or in person. (Core/Casual User)

If a thorough, or more thorough training -- or closer to hand holding -- session(s) were developed I would have had more confidence in use of COL and other net services. Curt did a very nice job, yet I still felt I did not have a mastery of the service. (Core/Casual User)

The one employer reported that the jobs listed were not relevant for his/her workers; however, the types of jobs he was seeking were not ones consistent with the Careers On-Line mission. Careers On-Line staff, in fact, screened all potential job postings and posted only those applicable for students or graduates.

Jobs listed don't have enough relevance to my injured workers. I need more entry level jobs in areas that require specific vocational preparation. I am a vocational rehabilitation counselor working with Workers' Comp cases in the State of California. (Employer)

When examining the reasons users did not use Careers On-Line after the three-week follow-up survey, insights were gained regarding satisfaction with services provided. In general, users did not return to Careers On-Line because they were not ready to look for a job, they wanted more information, or they were looking for jobs in another part of the country.

Long-Term Outcomes

Core/casual users and career service providers obtained desired information. Responses to the six-month follow-up survey indicate that 67% to 85% found the information they were seeking regarding job accommodations, adaptive technology, and disability services (see Table 29).

In open-ended responses, users also reported that Careers On-Line helped them find information they or their clients needed, helped them with career exploration and development, gave them another resource for finding internships and future jobs, or had potential for helping them in the future.

In what ways has Careers On-Line benefited you?

[Careers On-Line] provided so much information in one spot. (Career Service Provider)
By offering a site that has a variety of information useful to working with my clients. (Career Service Provider)
Hoping to use as an on-line job search service for my clients that are in the placement phase of vocational rehabilitation. (Career Service Provider)
I think Careers on line will help me when I am thinking seriously of looking for a job and it will make my job search easier. (Core/Casual User)
General information and ideas. (Core/Casual User)
It allows me to get more career information on other web servers. (Core/Casual User)
It helped me decide what degree I want to study for. (Core/Casual User)
Mainly by providing information and helping my ideas come into focus. (Core/Casual User)
Careers On-Line offered me another place to look for work which was greatly appreciated. (Core/Casual User)
Gave me another resource for finding an internship and future job. Couldn't find much on my specific profession though. (Core/Casual User)
It hasn't yet but may in the future.

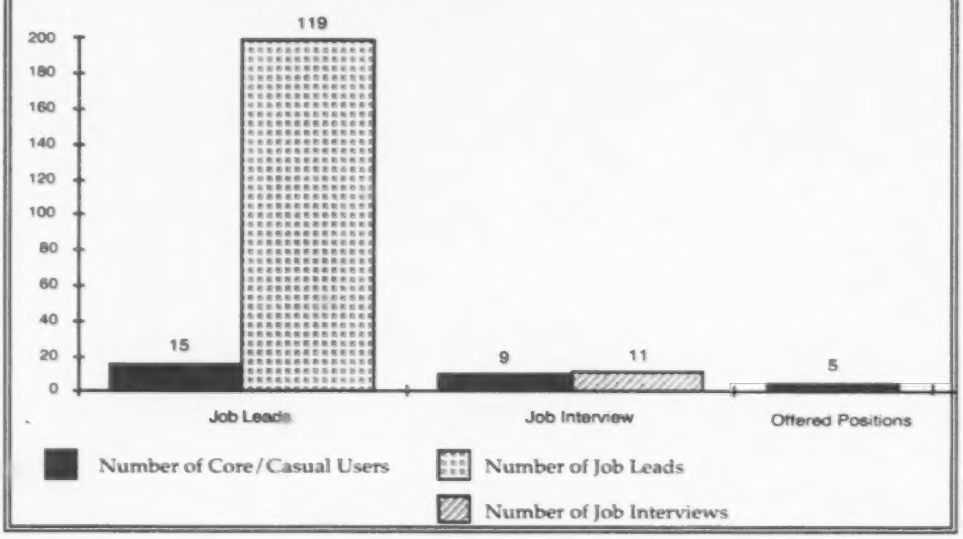
Table 29
Six-Month Follow-up Survey
Information Obtained

Of those searching, number who found information on:	**Core and Casual Users**	**Career Service Providers**	**Employer** Was not Looking for this information
Job accommodations	10 (77%) (N = 13)	2 (67%) (N = 3)	NA
Adaptive technology	10 (83%) N = 12)	2 (67%) (N = 3)	NA
Disability services	11 (85%) (N = 13)	3 (75%) (N = 4)	NA

Fifteen users who responded to the follow up survey obtained job leads and five users obtained a job because of Careers On-Line. The results from the three-week follow-up survey and the six-month follow-up survey were combined because respondents regarding obtaining a job lead or a job were unduplicated. Only 127 users who responded to the three-week or six-month follow-up surveys were

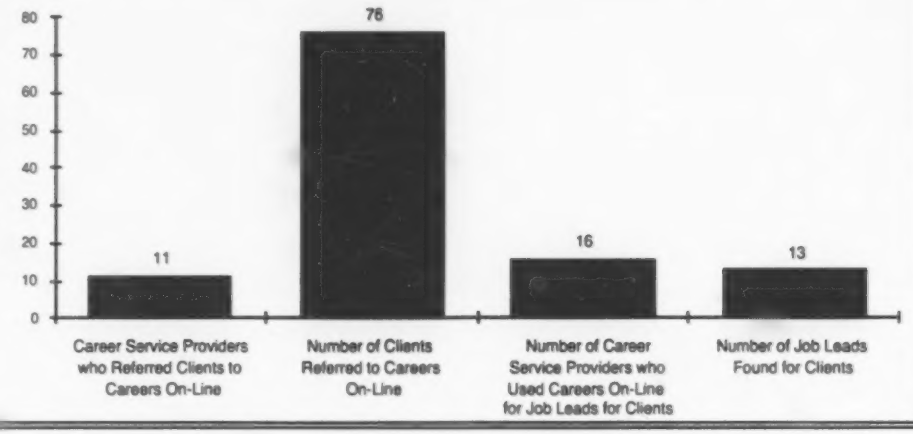
looking for a job. Of these, 15 users obtained a total of 119 job leads, 9 had a total of 11 job interviews, and 5 obtained jobs because of Careers On-Line services (see Graph 18). Because of the way the data were collected, these figures may be a significant under-representation of the actual number of users who obtained job leads or jobs through Careers On-Line. There were more than 112,340 hits on the Careers On-Line job and internship postings database, yet only 704 users completed a baseline survey. The rest were lost to follow-up. It may be that these users obtained a job lead but did not consider letting Careers On-Line know of their success. Also, even with the 704 users, many changed their e-mail addresses and therefore were lost to follow-up. It's possible that they obtained a job and that was a reason their e-mail address changed. Finally, early versions of the survey included a question that eliminated those who had obtained a job from completing the survey. This problem was corrected in later versions of the survey.

Graph 18
Careers On-Line Outcomes for Core and Casual Users



Career service providers referred clients to Careers On-Line, used Careers On-Line to look for leads for clients, and found leads for clients. The data from the three-week follow-up survey and six-month follow-up survey were combined because the respondents were unduplicated. This analysis revealed that 11 career service providers referred 76 clients to Careers On-Line, 16 career service providers used Careers On-Line to look for leads and found 13 leads for a client (see Graph 19).

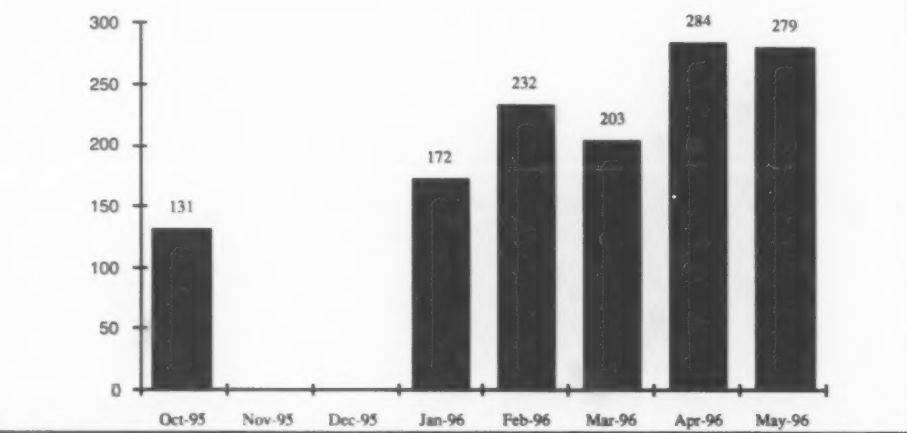
Graph 19
Three-Week and Six-Month Follow-up Survey Combined
Outcomes for Career Service Providers



Assistive Technology Lab Usage and Training Evaluation Summaries

Use of the Assistive Technology Lab increased over time. Logs were maintained at the Assistive Technology Lab to provide an accounting of the use of the lab. Certain factors made keeping an accurate count not feasible: not everyone who used the lab signed in and lab assistants were often working with users and not able to monitor the lab sign-in sheets. The data available, however, do show that lab usage increased from October 1995, when the labs were first maintained, through May 1996 (see Graph 20).

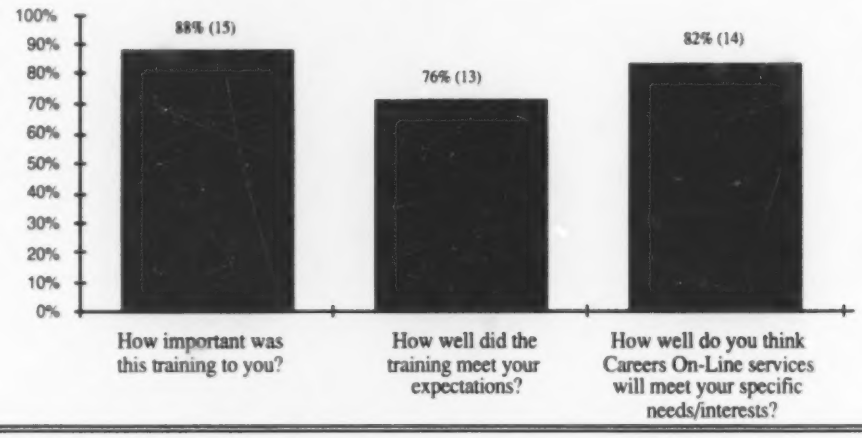
Graph 20
Use of the Assistive Technology Lab
October 1995 through May 1996



Note: Number on vertical axis represents the number of visits to the lab. Data not available for November and December 1995.

Student participants were very satisfied with the Careers On-Line training. Students who participated in the workshops during year one were asked to complete a questionnaire regarding the Careers On-Line training. A total of 17 questionnaires were completed. As can be seen in Graph 21, participants found the training to be important, it met their expectations, and they believed that the Careers On-Line services had the potential to meet their needs and interests (see Graph 21).

Graph 21
Evaluations of the Careers On-Line Workshops
N = 17
(Responding 4 or 5 on a five-point scale)



When asked, "What did you like most about the training?" respondents focused on the instructor, pace, and content. Two students appreciated the hands-on nature of the training. Two students liked the availability of help. One of those students also appreciated the chance to learn at their own pace. Two students liked the size of the group and the individual feedback. Four students appreciated the opportunity to learn about what is available, including the Minuet System, e-mail, and all the options on the database. Two students liked the casual nature of the training and four students mentioned the instructor as being patient and very helpful.

The responses to the question, "What did you like least about the training?" tended to focus on technology issues. Students' comments included, "loading the disk onto the computer, " "the computer and adaptive technology problems," "unable to do hands-on with computer at the second session," "the voice activated computer did not work properly," "software sometimes crashes." One student did not feel that the training was applicable to their present needs, another felt it was too long, and another believed that the second part was not helpful. Five students did not respond to this question which may indicate that the training met their needs.

When asked how the training could be improved, seven did not offer suggestions. For the other ten students, the responses were very individualized and did not tend to cluster into themes. Their specific responses follow:

More in-depth training for what I will actually use; like e-mail, gopher.
Mail instruction sheet out before training. Allow 2 hours for first session (cover everything in one session and leave second session optional).
Maybe have each class on video so that when the systems fail the class can still continue with visual/audio aid.
Have more organized exercises.
More time for individual help beyond scheduled class time. Refresher review (optional appointments). Guided individual tours as needed.
Guarantee of employment.
I wish the technology could meet my needs.
Weekend training available.
This survey could use improvement!
A little hands-on might help -- if it came towards the end of the session (i.e. guided practice).

Employers and career service providers were very satisfied with training.

Six workshops presented by Careers On-Line staff were evaluated by participants. Questions varied, but included such items as the usefulness of the workshop, the effectiveness of the presentation, the usefulness of handouts, and the effectiveness of visual aids. Based on a 5-point scale (5 representing the most favorable rating), presenters achieved a mean score of 4.4 (range 3.43-5.00). See Appendix C for more complete information on these evaluations.

Case Scenarios

The information in the following case scenarios was obtained by interviewing Core users who were current and former students with disabilities at the University of Minnesota, two casual users with disabilities who came to Careers On-Line while surfing the Web, and two career service providers (see Appendix B for interview protocol). Names, and in some cases gender, are changed to preserve anonymity. These stories speak to the benefits of Careers On-Line and suggest ways the service could be improved.

Careers On-Line core and casual users found significant benefits in the area of career exploration and gaining access to information about available jobs. Their comments included that they "learned about companies interested in hiring people with disabilities," "obtained career information for myself and my students, " "gained access to jobs only posted on the Internet," "learned how skills fit job requirements," became "more independent in job search," and "conducted a national job search" because of Careers On-Line. One student did not use Careers On-Line but planned to as he got closer to graduation. One core user reported using the resume information database to develop a resume and put it on-line, and one casual user reported that she used the Job Accommodation database to locate information on the Americans with Disabilities Act.

For the students who knew how to use the computer, it was easy to use Careers On-Line whether it was on the Web or Gopher. Students who had limited technology skills obtained assistance from Careers On-Line staff regarding adaptive technologies and how to use those technologies.

Although there were a variety of suggestions for improving Careers On-Line, the most consistent was expanding the job and internship database to include a wider array of listings.

Two interviews were conducted with career service providers. One had the perception that the jobs posted applied only to positions at the University of Minnesota (not an accurate perception). One had expertise in the area of accommodations and found the Careers On-Line resources most suited for novices. Another career service provider had used Careers On-Line extensively and had explored all five databases. He believed that the information had been useful to his clients and had helped him to stay current in the field.

The following case scenarios are included to provide a more comprehensive description of the ways Careers On-Line was used, suggestions for improving its services, and benefits from using Careers On-Line.

Kevin -- Core User with Disability

Kevin was a sophomore when he first began using Careers On-Line several years ago. A chemistry major, Kevin reported that he did not have difficulty learning how to use the service. "At the time I learned how to use Careers On-Line, I was experienced in using the computer. For people without experience, it may be more difficult." Kevin became familiar with computers in high school.

Kevin believed the main benefit of using Careers On-Line was that he learned about companies that were interested in hiring people with disabilities. Although he had not used Careers On-Line for the past two years, Kevin expressed an interest in using the job and internship posting database closer to graduation. He said he was appreciative that services like Careers On-Line and Disability Services are available to students.

Kevin did not use the other databases (adaptive technology products and resources, resume information, job accommodation information and career and educational planning resources) because he was not looking for that type of information, although he believes other students might find the technology and accommodations information useful.

When asked what information services like Careers On-Line should provide, Kevin reported that in addition to job postings he would like to be able to access information on resume writing, disability disclosure, and rights and responsibilities of employers and applicants with disabilities. When asked what Careers On-Line could do to improve its services to students at the University of Minnesota, Kevin said that he would like Careers On-Line to provide written instructions for using the service as well as in-depth computer training for students who have limited exposure to computers and the Internet. He also recommended that Careers On-Line instructors train students on one computer instead of having each student work on their own

computer terminal. Kevin thought that some of the students in the training session were more interested in getting into the system than in listening to the instructor.

Beth -- Core User with Disability

Beth is a part-time student at the University of Minnesota as well as a part-time counselor at another institution. Beth described herself as having been proficient in the use of computers before she started using Careers On-Line and therefore she had no problems. "Careers On-Line is very easy to work around and easy to maneuver." She also reported that Careers On-Line staff was very responsive to her needs. For example, Beth discovered a problem with the way something was displayed visually. She pointed this out to Careers On-Line staff and the problem was fixed.

Now an avid Internet surfer, Beth said she is a frequent user of Careers On-Line and that she used the service only last week. When asked in what ways Careers On-Line had been useful to her, Beth replied that she had focused mainly on the jobs and internship database and that she used this information not only for her own career information, but for that of her students as well. Beth said that Careers On-Line has helped her to become "more aware of what's out there and that [the Internet is] a growing, popular way of gathering information." She also stated that the links to other services "gave her access to things that she would not necessarily have access to," such as jobs which are posted only on the Internet.

Beth read through the other databases and plans to surf through them again when she has time. As a result of using Careers On-Line, Beth has applied for positions and suggested that her students use it as well. In her opinion, the strengths of Careers On-Line are its quick and easy access, the number of jobs and internships posted, and its availability to users who do not have time to conduct a job search during regular business hours. Beth said she does not believe the Internet can take the place of networking, but that it is a good supplement.

Greg -- Core User with Disability

Greg began using Careers On-Line as a returning student. He completed his associate's degree at the local community college and took some time off to work before returning to college to pursue his bachelor's degree. Greg reported that he was one of the first group of students to use Careers On-Line. Greg was familiar with and comfortable using computers when he began using Careers On-Line. When he completed his training, Careers On-Line was located on Gopher. Greg reported he "had some problems getting into the site" and that "the hardest problem was getting into Gopher."

When asked about the usefulness of Careers On-Line, Greg stated that he did not find the types of positions for which he was looking and that the service was not user friendly. "I needed a more permanent job than what was on-line," he said. Greg also thought that the service needed more advertising and that staff needed to actively follow through in developing the service. For example, Greg was supposed to assist in training other students how to use Careers On-Line but "that never happened."

Michelle -- Core User with Disability

Michelle was not proficient in using computers when she began using Careers On-Line two years ago. As a graduate student, she now not only feels comfortable in using computers, but is also comfortable in using speech output software. Michelle said that Careers On-Line staff was instrumental in helping her learn how to access adaptive technology as well as the Internet.

Michelle used Careers On-Line when the project first began and Careers On-Line was on Gopher. She said she had no problems with Gopher and that staff was available for one-to-one assistance. She also stated that the speech output software she uses interfaces better with Gopher than with Netscape, so she continues to use Gopher to access Careers On-Line at home.

In describing the benefits of using Careers On-Line, Michelle said that the job and internship database helped her become more "aware of how her background and skills fit specific job requirements." She also said that Careers On-Line has enabled her to become more independent in her job search. Michelle reported that in the past she had readers read advertisements, now she is able to access the information in a timely manner herself. Careers On-Line also offers her the ability to locate jobs she might not find elsewhere and conduct a national job search without spending a lot of time and energy.

Although Michelle has not used the adaptive technology products resources or the career and educational planning resources database she plans to use these when she is closer to graduation. She did, however, post her resume on-line, using information from the resume information database.

One suggestion Michelle had for improving Careers On-Line was to provide a wider variety of positions in the job and internship database and place city and state locations in more prominent positions so they are easier to find.

Jeri -- Casual User with a Disability

Jeri found Careers On-Line while searching the World Wide Web for interesting sites. A daily Internet browser, Jeri said she was attracted to Careers On-Line because of its layout and ease of use. Jeri reported that her use of Careers On-Line mainly focused on the job and internship and job accommodation information databases. The main benefits to Jeri in using the Careers On-Line Job and Internship database was that it gave her ideas of career areas to explore and served as a starting point to locate other sites. She reported that she had not actively pursued any job leads using Careers On-Line because she was not currently seeking a job, but that she had used the job accommodation information database to locate information on the Americans with Disabilities Act, a subject on which she had little information.

When asked if she had any suggestions to improve Careers On-Line, she said she did not. She reported that she had used a number of sites which focus on employment and disability and that "one was not better than another."

Kim -- Casual User with Disability

Kim, an occasional user of the Internet, became aware of Careers On-Line through a recommendation of a friend. When asked if she would be willing to be interviewed about the service, Kim said that she "looked at it a couple of times but the postings were so old I no longer use it." Asked if she had any suggestions or feedback, Kim said that she did not look at the other databases and that she would suggest that Careers On-Line find a way to update the postings. (Kim used Careers On-Line during the first year of the project, before a system was in place for keeping postings up to date).

Joe -- Career Service Provider

Joe, a counselor specializing in disability and adaptive technology, started using Careers On-Line several years ago when the project first began. Joe said he knew some of the project staff and that he was curious to find out more about the Internet and what types of jobs were on-line. He logged onto Careers On-Line approximately four times but found that the jobs listed were very specific to the University of Minnesota. When asked to clarify that statement, Joe said he thought many of the jobs were positions at the University of Minnesota and that Careers On-Line did not offer positions with a variety of companies. (Although the job posting database has a section on University of Minnesota jobs, other sections have jobs from a variety of companies)

Joe reported that although he used some of the links to other job resources, he did not remember whether he located these links through Careers On-Line or from other sources. Since Joe specializes in adaptive technology he said that he did not gain any new information from the adaptive technology products

and resources database; therefore, he did not look at it again. Joe stated that the resume information database and the job accommodation information database seemed somewhat "duplicative" of other Internet resources. He also believed that the information provided in the accommodation information database failed to reach the second level of audience needs. For example, he said that the information provided was helpful to novices, but that it did not address more difficult accommodation issues. Joe did not use the career and education planning resource database since it was specific to the University of Minnesota.

Karl -- Career Service Provider

Karl, a career service provider, located the site while surfing for career-related information on the Internet. Karl reported that he was attracted initially due to the graphics and then because of the breadth of services. Karl said one of the most useful aspects of Careers On-Line was its many links to other career-related sites. He also said that he has learned a lot about career resources from the information on Careers On-Line.

When asked about the various Careers On-Line databases, Karl said that he had explored all five databases. He used the job and internship, job accommodation information, and adaptive technology databases to gather information, but he focused on the resume information and career and educational planning resources databases more thoroughly. As a career counselor, he has referred his clients to the resume information database and this information has also helped him to stay current in the field. Karl also refers his clients to the career and educational planning resources database. He believes that this information on-line is easier and more manageable for clients to use than when it was solely in written form.

Although he brought up *Monster Board* and *Catapult* when considering other useful sites, Karl said these serve a different purpose since they do not have a disability focus. Karl stated that the greatest benefit in using Careers On-Line is that it has helped him "appreciate the Internet" When asked for suggestions to improve Careers On-Line, Karl said that he would like to see it available to everyone -- "a central service for all students."

Perceived Value Of The Project

When data from the surveys, program records, focus group interviews with staff, and case scenarios are viewed as a whole it appears that the following conclusions regarding the value of Careers On-Line are warranted:

Careers On-Line enabled Disability Services staff to build Web skills. Careers On-Line was implemented at a time when use of the Internet and the World Wide Web was expanding rapidly. Project staff believed that this project helped Disability

Services staff at a number of levels within the organization develop their technology capacity.

> *A big part of the project is the organizational work that goes on . . . I think there's been value at that level.*

> *I feel that for a number of people on the staff, working with Careers On-Line has made us more effective in using the Web as a tool in our work. Without this project I don't know that I would be where I am now in terms of using the World Wide Web . . in using it in my work to help other professionals and students.*

> *This project has been instrumental in keeping Disability Services as well as myself [current with] the computer service side of things and tuned into what's going on with World Wide Web and up-to-date with the latest developments. I think I would have been curious anyway, but this project has required me to actually sit down and learn how to get it done [and be] more than just curious about it.*

The linkage between the Distributed Computing Services department and Disability Services built adaptive technology capacity at the University of Minnesota. Distrubuted Computing Services loaned to the project their adaptive technology coordinator at 50% time, with their department and the grant sharing the cost for the position. In addition, Academic Affairs allocated $100,000 as matching funds for adaptive technology equipment and Careers On-Line staff support, contingent upon obtaining the grant from the Office of Special Education and Rehabilitative Services.

The Careers On-Line project gave the technology coordinator an opportunity to help the University build capacity in the knowledge of and provision for adaptive technology for disabled students. He reported in a focus group interview:

> *I always wanted to promote assistive technology and that was my primary objective working with Careers On-Line. Part of the issue is that obtaining general technology funding is hard . . . The partnership with Disability Services provided a tangible outcome that could justify spending for technology.*

This inter-department collaboration ultimately resulted in benefits for students with disabilities. Other comments from staff focus groups included:

> *The main value has been increased availability of assistive technology on campus . . . the broader value has been giving students exposure to the technology and using the technology. That awareness and [those] skills they can take with them in any setting whether it is a job search or an employment setting or just for personal use . . . One of the overall values of this project is how it helps people be more independent in their job seeking . . . One of the*

students [we worked with] has to come into his own as a job seeker by using some of the [computer] systems. [In the past] he used to rely on readers.

[We have found that] the students tend to gravitate toward the places where they get good support. Even if the other computer labs at the University are accessible they tend to go to the [lab supported through Careers On-Line]. It is not a clear cut case of one is good and one is bad. But [students] perceive that the technology is more reliable and maintained quicker or that they get immediate interaction with a staff person. They also [are able to] interact with each other. A few students say they really like the . . . [it gives them an opportunity to talk with] students with similar disabilities [regarding] their struggles in looking for a job which if they are out in a mainstream lab [they would not have].

I have found that a student may get a computer funded by their DRS [Division of Rehabilitation Services] counselor; '[however] no one is helping them figure out how to use it . . . [the adaptive technology lab] helps them obtain those skills.

DRS and state services . . . are big supporters [of the use of adaptive technology] but a lot of the staff aren't technology people, which is understandable. They come out of rehab backgrounds . . . which is fine but they feel up in the air when they get to a technology question. [At the University] I had a call yesterday where a rehab counselor was willing to provide equipment . . . but had no clue what the student should buy. There are no simple answers to the [what to buy question]. You can't sit down in a five-hour workshop and learn everything you need to know . . . For the call yesterday, my solution was relatively simple . . . There was no way that the student [or DRS counselor] would have had that knowledge . . . even if [they] went to a workshop because the field is so broad . . . you're talking about every type of disability . . . about a lot of different types of computers and trying to make them match.

The nondisabled community gained exposure to ways adaptive technology can be applied to work settings. Based on program records, more than 200 people attended workshops designed to demonstrate the possibilities of adaptive technology. Project staff believe that this exposure helped them become aware of how adaptive technology can break down barriers in the workplace.

We need to say something about the value to the nondisabled population for this project . . . If you add up all the people who took workshops that were specifically on adaptive technology . . . it would be a significant number of people who became aware of how people with disabilities can function effectively in the workplace with the adaptive technology. That is going to in the long run mean more job opportunities for students with disabilities

because there are a lot of people who . . . don't realize all the technology [people with disabilities] can use to manage a job.

[Knowing how to use the adaptive technology] makes students more marketable. They can now go out to their employer and say, "I need JAWS . . . Decktalk . . . and this is how it works."

Careers On-Line served as a launching pad to the Internet. Upon reflection, Careers On-Line staff suggested that the true value of the project may be that it gave students a place from which to enter and use the Internet. Also, it may have been a way, as the baseline survey data would indicate, for users in general to connect with other sites.

My gut feeling is that the service that we are really providing is getting people connected to the Internet and serving as a launching site for them to gather information. When I look at the surveys, people don't seem to be coming back to Careers On-Line, using it over and over and over. But they are using it as a way to find out, "Where do I get started?" "What do I do?" "How do I use the system?"

We can look at [that users did not] come back to use our services in two ways. One is as failure that they didn't use our services repeatedly . . . but if you look at it that the project was a launching point, that it helped them get in and get going, then it was a great service . . . because there's lots more on the Web besides us.

As a person who uses the Web on [numerous] occasions, I know that I and other users don't tend to return to the same exact spot unless there is a constant, immediate need . . . We tend to build a set of bookmarks where we can go back to something on occasion. I can picture [most of our users] doing this, using our site to get to those national sites and using the national sites more. [I would only expect for them to return if they are looking for jobs in Minnesota.]

[We don't tell] our users how to make a bookmark . . . I know when I first started using the Web, I would find something and then I had no idea how to get back there . . . If we had something [at our site that explains], "If you like our site, here is how to make a bookmark so you can come back to it," then we probably would have more repeat business.

Another [possibility] that we have not evaluated . . . is how many students found another site that was more useful to them, but they found it through Careers On-Line . . . [For example] Career Mosaic may be just what they need, [they connected to that site through Careers On-Line], made a bookmark, are going back to that site but not returning to Careers On-Line because they don't have the need.

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Careers On-Line contributed to lessening the technology gap between disabled and nondisabled. Careers On-Line staff believe that they have helped the disabled community become a part of this new wave of obtaining employment through the Internet. These comments were made during a focus group interview:

> *We have helped to close, not totally close, but had an influence on keeping the gap from growing too wide between disabled and nondisabled when it comes to using technology. The literature is saying that as the technology develops, the adaptive aspects are not keeping up. There is a big danger that people with disabilities could get further and further behind in terms of being up-to-date with technology. I think by putting ourselves out there in front in one of the newest things that technology is being used for that we placed the disability community in the forefront instead of [in a place of] trying to catch up from behind. We [at Careers On-Line] were more ready than the community was for posting jobs this way. [Using the technology] to post jobs and get jobs is a very new thing. They are predicting that in the future this is going to be a major way that jobs are going to get filled.*

> *Yesterday I had a call from Columbia School of Business. A professor there had seen our site and was calling to say, "One of our staff has a learning disabled [child] who is getting ready to go out into the market. We're looking for a special program to put him into." The fact that we, [Careers On-Line], are out there . . . seems to situate us, in addition to the Job Accommodation [Network], to being the other main game in town on the Web when it comes to employment and disability.*

> *When we started we were using Gopher because Web was just sort of a neat idea at the time. Most computers weren't out far enough to provide it to the user. In a year or two that all changed. It is really weird to think back to the beginning about how the Web was such a novelty. Most computers weren't fast enough to display it. I remember when we first talked abut it we were worried that not enough people would have the Web and maybe we shouldn't switch to the Web . . . I think we have done a good job of keeping up with the wave and introducing this issue of employment and disabilities early on into that.*

Value of Careers On-Line is found in linkages to other sites. As presented in the baseline survey data results, at least 164 Careers On-Line users who responded to the study found and/or used another job posting site (e.g. *JAN, FedJobs, Career Mosaic, JobWeb*) through the Careers On-Line hot buttons. In a focus group, staff talked about the evolution of this linkage with other employment services.

> *Our postings have been very valuable in their own way. They have provided a nice local emphasis that wouldn't have been out on the Net without us. The first way this project was envisioned was that a user would tap into a*

Gopher site. When you found a good Gopher site you stuck with it . . . [With the Web, linking with other sites became possible]. Our linking Careers On-Line with other sites wasn't even written into the proposal and it has become a major part. We are finding that there is a lot of power and usefulness in the linking and letting people go to other places.

Users explored career options through Careers On-Line. A number of comments on the open-ended survey questions indicated that Careers On-Line helped the users decide on their career direction and expanded their horizons regarding the number and type of jobs available for persons with disabilities.

Employers, service providers, and students benefited from Careers On-Line consultations. More than 575 employers, staff and students received consultations from Careers On-Line staff. In these consultations, Careers On-Line staff answered questions regarding the use of the Careers On-Line databases and other technology issues.

Resources developed through Careers On-Line have and will continue to benefit students, employers, career service providers, and the disabled community at large. The *Job Accommodation Handbook* has been made available through print and electronic (job accommodation information database) mediums. In addition, *Career Development, Employment, and Technology for College Students and Graduates with Disabilities: An Annotated Bibliography* and *Job Search Techniques for College Students and Alumni with Disabilities* were developed by staff associated with Career Connections, Careers On-Line, and Disability Services.

Conclusions Regarding Careers On-Line

When all is said and done, what is the value of Careers On-Line? The data indicate that the following conclusions are warranted.

Careers On-Line provided a quality service. The staff developed a comprehensive system which maximized recent technological developments. At the time of movement away from Gopher to the Web, the Careers On-Line staff were active because they saw a way to reach more users and provide a more effective service. This willingness to adapt meant that Careers On-Line was used 310,093 times during the grant period.

The utilization of networks established through Career Connections and additional efforts to link with area employers meant that Careers On-Line was able to give users access to 3,312 local job postings from 274 area employers. In addition, users could link through Careers On-Line to thousands of additional postings on other career-related sites.

Many were concerned that the movement toward the Web would mean that the target population would not be served. The data indicate that this was not the case. Careers On-Line was utilized most frequently by individuals located at educational institutions (30%), and 36,949 (12%) of the 310,093 hits were from computers located at the University of Minnesota, a primary target audience. Users also took advantage of the adaptive technology products and resources database

(119,331 hits), the job and internship postings database (112,340 hits), the resume information database (2,901 hits), information regarding Career Connections (197 hits), and other information (17,936 hits).

A total of 443 (63%) users who responded to the baseline questionnaire had disabilities, another indicator that Careers On-Line was successful in reaching the target population. Careers On-Line reached populations traditionally not Internet users; 42% were female, 33% characterized themselves as being from cultural backgrounds other than European American, 55% of the core users had never used e-mail, and 64% of the core users had never used Internet before becoming associated with Careers On-Line.

Of the 182 users who responded to the three-week follow-up survey, 43% were satisfied with Careers On-Line. The percentage of satisfied users and the average satisfaction ratings were lower than Careers On-Line staff desired or than would usually be expected with other programs offered through Disability Services. However, satisfaction data were only available for a small portion (182) of the Careers On-Line users. Also, so little is known about user satisfaction with Internet services that it is difficult to interpret the statistics obtained. As compared to other Internet services, do the numbers mean that Careers On-Line is "better than most," "about the same as others," or "worse than others." Because the field of survey research using the Internet is in its infancy, it is impossible to know.

One of the primary expectations regarding Careers On-Line was that it would help users obtain job leads and employment. Data from the three-week follow-up survey and six-month follow-up survey show that there were only 127 users who came to Careers On-Line looking for a job. Of these, 15 users obtained a total of 119 job leads, 9 had job interviews, and 5 obtained jobs because of Careers On-Line services. Because of the way data were collected, these figures may significantly under-represent the number of users who obtained job leads or jobs because of Careers On-Line. Early versions of the survey eliminated those successful in finding jobs by the way questions were asked. In addition, a very small number of users completed the follow-up survey. It may be that users obtained a job lead but did not consider letting Careers On-Line know of their success. Also, many changed their e-mail addresses and therefore were lost to follow-up. It may be that they obtained a job and that was a reason their e-mail address changed.

Evaluators working with Internet projects discussed the issue of predicting outcomes at length at the 1996 American Evaluation Association Annual conference in Atlanta, Georgia. Jonathan Morrell from Industrial Technology Institute in Ann Arbor, MI; William Trochim, professor at Cornell University; and John Green from Leon County Schools recommended that project staff and evaluators be very cautious in predicting outcomes from Internet projects because it is too soon to be able to predict such outcomes with any accuracy. They reported that the Careers On-Line staff experiences are similar to those of innovative Internet projects across the country, in that generally unintended outcomes are more likely to occur than those predicted at the beginning of a project. This is especially true for projects that began with Gopher and moved to the Web.

What are the outcomes of Careers On-Line? Many are noteworthy:

- Careers On-Line helped core users, casual users, career service providers, and employers connect with other Internet job resources.
- Careers On-Line helped users obtain information about disability services.
- Users obtained career resource and technology information, personal use or to share with students and clients.
- The most significant benefits for users may have been in the areas of career exploration and gaining access to information about available jobs. Students with disabilities were helped to see the range of employment options and how their skills were marketable. Careers On-Line helped them expand their horizons regarding their work futures.
- Careers On-Line enabled Disability Services staff to build Web skills.
- The nondisabled community gained exposure to ways adaptive technology can be applied to work settings.
- Careers On-Line served as a place from which students could enter and use the Internet.
- Careers On-Line contributed to lessening the technology gap between disabled and nondisabled.
- Resources developed through Careers On-Line have and will continue to benefit students, employers, career service providers, and the disabled community at large.

One factor that promoted success of Careers On-Line was the staff. They possessed technical expertise and a willingness to keep in touch with technological evolution and use those advances to benefit the project. Staff were open to feedback from users and continually used this feedback to improve program services. Staff also were willing to struggle with the new evaluation challenges of obtaining information from Internet users. This will benefit the field of evaluation while the implementation of these new communication technologies has the potential to greatly expand the provision of services to students with disabilities.

MODEL BUILDING AND IMPLICATIONS FOR REPLICATION

This chapter provides reflections on the development of the model, shares lessons learned, reports on plans for continuation of the model, and gives recommendations for replication.

Reflections on the Development of the Model

Careers On-Line developed the first career services site on the World Wide Web designed specifically for college students and graduates with disabilities. The model included (a) six on-line databases: job and internship postings, resume information, adaptive technology products and resources, career and educational planning resources, mentoring information, and job accommodation information; (b) a state-of-the-art adaptive technology demonstration lab; and (c) training for students, career service providers, and employers on using technology for the job search and in the workplace. Throughout the project, Careers On-Line evolved as the Internet grew in popularity and as project staff learned more about the needs of its users.

Database Development. During the first year of the project, Careers On-Line focused on coordinating and implementing the technology needed to initiate the project. This was done by analyzing what systems were currently in place and how the project could be made compatible with those systems. Project staff also worked with the Disability Services technology coordinator to determine what software could be used to integrate the project within Disability Services. For example, the department had purchased Fourth Dimension (4D) software to establish a database system for the entire department. This software also was used for Careers On-Line database development. After the Careers On-Line grant period, Disability Services has continued to manage both the service database and five of the Careers On-Line databases. The sixth database (adaptive technology products) is managed by Distributed Computing Services.

Training for Students. In addition to developing the databases in year one, project staff concentrated on developing group training for students with disabilities. Initially, staff had envisioned posting student resumes directly on Careers On-Line. Therefore, resume writing and job search skill training were provided by Career Connections staff in conjunction with Careers On-Line group training. It was later determined that resume information, and not actual student resumes, would be posted on-line, and that training on using on-line services would be conducted on an individualized basis in the demonstration lab. Therefore, students were referred to Career Connections for individual assistance with resume writing and job search skills.

In year two, students signed up for training at the assistive technology lab where lab attendants helped them try out adaptive equipment and access Careers On-Line, as well as locate other Internet career resources. By year three, project staff had recruited and trained only 49 University of Minnesota students with disabilities. It appeared that students who were not already using the Internet were not ready to view the Internet as an option for career planning and job seeking. However, casual users had made over 300, 000 hits to the site by year three.

It was also determined that casual users did not require training since they were already accessing the database. However, casual users were given contact information on how to reach Careers On-Line, should they have questions on how to locate specific information.

World Wide Web Development. In year two, the project initiated an electronic page on the World Wide Web. Project staff believed this was an opportunity to increase the number of connections to Careers On-Line. The World Wide Web proved to be a very effective avenue for increasing the number of users to the system. In May of 1994, when Careers On-Line was available only in Gopher, there were 985 connections made to the databases. In September of 1996, there were 34,091 connections made to the databases via Gopher and the World Wide Web. Also, by connecting to the World Wide Web, project staff were able to add links to existing career-related sites from across the country. This allowed the project to better serve its many casual users.

In year three, additional improvements to the system were made. For example, a feature was developed that allowed campus career offices to edit their own information on the career and educational planning resources database. This and other refinements were designed to decrease the amount of clerical support required to maintain the project after the life of the grant. Project staff also developed an additional database that focused on mentoring and informational interviewing.

Relationship with employers. Project staff found that employers preferred to work with Careers On-Line on an informal basis. For example, at the time of this writing, Careers On-Line had received job postings from 274 employers and had signed agreements with 54 of those employers. Project staff learned that many of these employers did not have access to the Internet; therefore, Careers On-Line was able to provide them a valuable service for recruiting qualified candidates.

Lessons Learned About Program Development

Technology advances will always necessitate program shifts in projects like Careers On-Line. Due to the changes in electronic communications technologies and the development of Netscape, project staff had to redesign certain aspects of Careers On-Line and continually retool Careers On-Line services to maximize system capacities and meet the demands of users.

Many employers are not connected to the Internet. Careers On-Line staff had to spend more time than anticipated to teach employers about the Internet and help them see the value in the system. Because so few employers were on the Internet, a great deal of staff time was needed to transfer job information from a print to an electronic medium. The project staff made these comments during a focus group interview:

> *Very few of the Careers On-Line employers were using the Internet. Most of them have closed systems, a local area network. They are very worried about security. Therefore, very few employers submitted jobs electronically. [Recently] I contacted 45 companies that have postings with us and 43 did not have access to Internet and did not have their own World Wide Web site.*

Use of the Internet for posting disabled students' resumes was not viable given confidentiality issues. Because the electronic medium distributes information to such a wide audience of users, Careers On-Line staff revised their thinking about providing resumes on the Internet. The project staff now refers students to other sources for resume assistance and provides the resume information database on the Internet. During a focus group interview, staff reported:

> *[We learned that] if the students put their resume on the Careers On-Line database it was, in fact, announcing their disability to the entire world and that wasn't necessarily the way they wanted to disclose their disability.*

Changes in technologies meant that training needs were different from what was originally anticipated. Throughout the project, staff learned that there were varying training needs. This comment mirrored others:

> *When we first started we had the assumption that we were going to have to train people on how to use all this stuff. Then we discovered that there was this whole group of people who knew how to use the Web and they didn't need to be trained. Then we thought, "Oh they don't need training. Let's put the information out there and they can access it." Originally we were going to develop electronic training manuals, etc. That wasn't the way it all works; you don't have to have separate manuals. You need to teach [users] right within the site. But then again, late in the project we discovered that users may know how to get to the site and how to look at [the materials] but sometimes they are not sure how to make the best use of the information. [We also found] that some users are much less experienced than others.*

The features of the technology meant that there were users looking for home-based employment from Careers On-Line. Careers On-Line staff came to realize from responses to the various surveys that there was a need to help disabled users locate home-based employment. This need was not anticipated in the original conceptualization of the project. In the last year, the staff added information on telecommuting but did not fully address the home-based employment need:

> *[The number of disabled users looking for home-based employment] was a very interesting finding. That shows a need that is not being met, the need for disabled people who need to work at home. Our project was not designed to help disabled people find jobs at home . . . although we did add information on telecommuting onto our site.*

Individualized training worked best. A prerequisite for using Careers On-Line effectively is knowing how to use a computer. Because of this and the difficulty of matching workshop offerings with users' personal calendars, the training approach shifted from being provided in a group setting to a one-on-one lab setting. One staff member's comments reflected others:

We tried some group trainings but we found it was really more effective to have an open lab and to have people available in the lab. [That way] students could come in on their own time and would have someone there to teach them.

Lessons Learned About Evaluation

Careers On-Line entered uncharted territory when attempting to conduct surveys on the Internet. Much was learned regarding the use of surveys to collect information from casual users:

Conducting internet surveys. The field of conducting surveys on the Internet is new and without clear guidelines. During the project period, no other career service providers on the Internet were collecting user data. Two providers reported making attempts to obtain user data but those efforts resulted in a zero response rate for one and a response rate of one for the other. The process of obtaining evaluation information by surveying Internet users is still in its infancy. Little information is available regarding the characteristics of survey respondents and nonrespondents and the logistical aspects of moving from paper/pencil to electronic surveys. Significant modifications must be made in the traditional paper-pencil questionnaire when attempting to survey by electronic means. A number of methodological issues have yet to be studied in a comprehensive way.

Interpreting satisfaction statistics. So little is known about user satisfaction with Internet services that it is difficult to interpret the satisfaction statistics obtained. Do the numbers mean that Careers On-Line is "better than most," "about the same as others," or "worse than others." Because the field of survey research using the Internet is in its infancy, it is impossible to know.

The evolving evaluation object. A strength of the project was that staff continually redesigned certain aspects of Careers On-Line and retooled services to maximize system capacities that were evolving because of changes in electronic communications technologies and the development of Netscape. Consequently, the evaluation object was not static. This had implications for the evaluation in that some respondents to the baseline survey and the three-week follow-up survey had interacted with the Careers On-Line database when it was initially developed and did not benefit from the modifications made later in the project. This may mean that they gave satisfaction and outcome information based on experience with an object different from the one that had evolved later in the evaluation.

Cost to users. The user purchasing on-line access through a commercial service must allocate some on-line time to this task, a situation that may decrease the likelihood of their responding. Welch et al. (1992) reported that their 30-minute survey cost respondents about $5.00. This might have been a factor in the number of people who responded to the survey.

Electronic survey responses. Electronic survey responses increased the data available regarding Careers On-Line. Before utilizing electronic communications for evaluation purposes, paper surveys were used to collect data from core users. After the first six months of the project, staff had collected 23 paper surveys from students with disabilities at the University of Minnesota who had used the computer labs.

One year later, after using e-mail and the World Wide Web for collecting data, over 700 surveys had been collected from both core and casual users.

Project Continuation

Using departmental funds by the department, Disability Services collaborated with a market research consultant to conduct a study to determine the feasibility of offering Careers On-Line (and other services) to business on a fee-for service basis. Interviews were conducted with representatives of 31 agencies that provide services to people with disabilities; focus group interviews were held with representatives of 17 Twin Cities businesses; and 700 members of the Twin Cities Personnel Association were surveyed.

The study revealed a positive response toward the proposal service offerings, with approximately 34% of respondents reporting that they would probably or certainly use one or more of the services offered. However, cost of the service was a major factor, especially for public and nonprofit employers. Services which were rated favorably included recruitment, training, consultation on accessibility and reasonable accommodations, and a disability hotline which would include research, information and referral (see Executive Summary of market research study, Appendix L).

Disability Services prepared a business plan and, at the time of this writing, was making arrangements to begin the service. As part of this new service, the Careers On-Line Web site will be maintained as it had been under the grant. The systems operator (now Disability Services' technology coordinator) will maintain the database, the project coordinator will solicit job postings from business, and a student data entry operator will enter postings. The technology coordinator and project coordinator will also continue to staff the information and referral services. The adaptive technology products and resources database is being housed and maintained by the technology coordinator in Distributed Computing Services. Although the job accommodation, resume information, career and educational planning resources and mentoring resources databases have been completed, the technology coordinator and career services coordinator will continue to refine these databases as new information is gathered. Also, because of the editing feature, career service offices will be able to update their own information as needed.

Recommendations for Replication

The following recommendations are made to those who wish to replicate the project:

- Build Internet training into ongoing services. Provide opportunities for students to learn how the Internet can be used as a tool and how the Internet can be of use to them. For example, students could be asked to use the Internet to do research for course assignments which would help familiarize them with the system.

- Build in interactive aspects to the site. Guide users as to how to take advantage of what the site has to offer.

- Take advantage of existing sites. Developing on-line databases is very labor intensive. As much as possible, make use of what has already been developed by linking to those sites.

- Build an infrastructure that can handle constant change. Everything in technology changes so rapidly that staff need to be prepared to keep up.

- Have a direct line of communication with employers. Follow how employers are using and prefer to use Internet tools.

- Communicate with other career-related sites. Compare experiences that other sites are having with users.

- Collect data on users. Employers want to know who will see their postings.

- Set up an automated data collection system. Obtain software that allows survey data to be downloaded automatically to save on staff time.

- Review data regularly and improve services based on data received. Constantly evaluate and improve the site, based on user feedback.

New Frontiers

The following are areas that Careers On-Line identified as needs but did not adequately address. New projects are encouraged to tackle these issues.

- Seek ways to provide information to disabled users who need to work from home. Technology offers new opportunities for people who are unable to leave their homes to work. They need to find links with employers interested in telecommuters.

- Find ways to screen and refer applicants to employers. Employers are very interested in getting referrals of qualified applicants. How to provide specialized services and still allow the student the opportunity to decide whether or when to disclose the disability is a challenging issue.

- Determine how to track users who use the service, get a job, and change e-mail addresses. Careers On-Line really had no adequate way of determining how many users actually got jobs through the service, because once students graduated, they lost their e-mail accounts, or if a user changed jobs, their e-mail account might be changed.

Conclusion

There are several reasons why on-line career services are important for the advancement of people with disabilities. There is great danger of the technology gap between disabled and nondisabled becoming wider, because technological advances frequently develop without adaptations to make them accessible to people with disabilities. Services are needed to make sure that people with disabilities have access to the same information as nondisabled people. Without it, they will not be competitive in the job market. Nondisabled employers and career service providers need to learn how technology can be used as a tool to make a particular work situation accessible to a person with a disability and how electronic communication can be used to link qualified applicants with disabilities to employers. Programs are needed to ensure that disabled people are in the right place when job search on the Internet becomes the norm. Technology is a powerful tool that people with disabilities need to use to take their rightful place in America's workplace. Those working in the field of disability have a responsibility to make that tool available.

APPENDIX A

PROJECT EVALUATION ACTIVITIES

APPENDIX A:
PROJECT EVALUATION ACTIVITIES

The purpose of the evaluation was both formative and summative. In the first two years, the evaluation provided Careers On-Line staff with feedback regarding the strengths and weaknesses of the project. During the third year, the evaluation shifted to a summative focus and helped document both user satisfaction with the services provided and the outcomes from this three-year project. EnSearch, Inc., commissioned as the external evaluator, was to:

- Assist staff in the development of data collection methods.
- Consult by telephone, fax, e-mail, or in person with Careers On-Line staff regarding the collection of evaluation information.
- Prepare for and conduct two focus group interviews with project staff.
- Assist with the analysis of qualitative and quantitative data.
- Meet with project staff to review and interpret summarized data.
- Write an interim evaluation report.
- Assist the graduate assistants with the writing of the "Project Evaluation Activities" portion of this final evaluation report.
- Write the "Service Delivery Accomplishments and Outcomes" section of this final evaluation report.
- Review the entire final report.

Evaluation Sources

Careers On-Line users included: 1) core users -- students/alumni with disabilities who received hands-on training from project staff and who used the University of Minnesota demonstration lab for accessing Careers On-Line, 2) casual users -- students and job seekers (both disabled and nondisabled) who accessed Careers On-Line from the Internet, 3) employers who posted job and internship listings with Careers On-Line, and 4) career service providers who used Careers On-Line to find job leads or information for their students.

Evaluation Methods

A number of quantitative and qualitative methods were used to collect data from the individuals who connected with Careers On-Line at its Gopher and/or Web sites. See Appendix B for copies of the surveys and interview protocols described below.

Baseline survey. All users were asked to complete a user survey when they were first introduced to Careers On-Line. Students (core users) who received training for Careers On-Line in the adaptive technology computer lab on the University of Minnesota campus filled out a paper or an on-line survey. Anyone who accessed Careers On-Line through the Internet (casual users, career service providers, or employers) could complete the survey in one of three ways: 1) complete the survey on the World Wide Web; 2) submit their e-mail address to Careers On-Line and then receive and respond to the survey electronically through their e-mail account; or 3) submit their mailing address and then receive and respond to the survey sent to that address. A total of 704 baseline surveys were received: 49 (7%) from core users; 356 (51%) from casual users with disabilities; 162 (23%) from casual users without disabilities; 120 (17%) from career service providers; 17 (2%) from employers.

Three-week follow-up survey. Three weeks after completing a baseline survey, each participant was sent a follow-up survey through either their e-mail account or through the U.S. mail. This time interval was deliberately chosen because staff felt that on-line users would have a recent memory of using Careers On-Line and therefore be able to answer questions regarding satisfaction with the service and outcomes. There was concern about possible memory loss if surveys were sent out after a longer time. The drawback to surveying users after only three weeks was that the likelihood of their having found a job or internship position was low. It was decided to undertake a second follow-up with users after six months.

Three versions of the three-week follow-up survey were distributed: 1) to core and casual users; 2) to career service providers, and 3) to employers. When a user failed to complete a follow-up survey within a week, a reminder letter was sent to the user with a duplicate follow-up survey. If this second survey was also not returned, the user was considered a nonrespondent. A total of 182 responses were received; 10 from core users, 95 from casual users with disabilities, 36 from casual users without disabilities, 37 from career service providers, and 4 from employers.

Six-month follow-up survey. A six-month follow-up survey was sent to those users who returned a three-week follow-up survey, its purpose being to assess the outcomes of Careers On-Line use. Did students with disabilities find jobs and/or internship leads? Had any user been offered a job through a lead found through Careers On-Line? As with the three-week follow-up survey, three versions were used reflecting the three target groups: core/casual users; career service providers; and employers.

The protocol for sending six-month follow-up surveys varied slightly from that of the three-week follow-up survey. First, only casual users who

completed a three-week follow-up survey automatically received a six-month follow-up. All employers and all career service providers who filled out a user survey were sent a six-month follow-up because there were so few respondents in these two groups. All core users (students with disabilities at the University of Minnesota who had received Careers On-Line training) were given a six-month follow-up survey. A sample of casual job seekers with disabilities were sent a survey.

More aggressive follow-up was undertaken for the six-month follow-up survey in order to have as high a response rate as possible. In addition to a reminder letter and duplicate survey, phone calls were made to nonrespondents. Even with these efforts, project staff were able to obtain responses from only 3 core users, 19 casual users with disabilities, 4 casual users without disabilities, 10 career service providers, and 1 employer.

System statistics. The evaluator and staff reviewed system-generated statistics regarding the number of computers accessing the Gopher or World Wide Web pages of Careers On-Line. These logs, called Glog and WWWlog respectively, recorded the number of hits to the Careers On-Line sites, which types of institutions (e.g. education, commercial) accessed the sites; the number of hits from computers located at the University of Minnesota; and the use of the Careers On-Line-generated databases (job accommodation information, resume information, adaptive technology products and resources). These logs were analyzed on a monthly basis.

Selected qualitative methods were used to gather information:

Telephone interviews. Eight users participated in in-depth interviews with the project coordinator in year three. Individuals were contacted and asked to participate in a telephone interview. Each was asked a set of evaluation questions designed to explore their experiences with Careers On-Line. The project coordinator wrote case vignettes based on these interviews.

Document review. The evaluator reviewed a number of documents and materials produced by Careers On-Line staff. These included quarterly progress reports, written materials such as the *Job Accommodation Handbook; Job Search Techniques for College Students and Alumni with Disabilities;* and *Career Development, Employment, and Technology for College Students and Graduates with Disabilities: An Annotated Bibliography*. The evaluator also periodically reviewed the Careers On-Line web site.

Focus group interviews. The evaluator conducted focus group interviews with staff at the end of the second and third program years to identify project strengths and weaknesses, outcomes, and lessons learned.

Analysis of Data

Paper surveys were collected by graduate assistants who also entered the data into a statistical database. Surveys received electronically through the Web or e-mail were sent to a mail management program and printed out; the data were then entered into the statistical database. All statistical data

were analyzed using SPSS. The analyses performed included frequencies, percentages, crosstabs, and one t-test. Qualitative data from open-ended survey questions were compiled into a word processing document and periodically reviewed by staff for formative evaluation purposes. Glog and WWWlog data were analyzed on a monthly basis. The focus group interviews were summarized and reviewed by staff to identify ways services to students with disabilities could be improved. In the fall of 1996, the external evaluator reviewed the quantitative and qualitative data, and identified themes.

Strengths and Limitations of the Careers On-Line Evaluation Design

The field of conducting surveys on the Internet is new and without clear guidelines. Careers On-Line entered uncharted territory when attempting to conduct surveys and follow-up surveys on the Internet. Much was learned regarding the use of surveys to collect information from casual users: 1) no other career service providers on the Internet were successfully collecting user data, and 2) significant modifications must be made in the traditional paper-pencil questionnaire when attempting to survey by electronic means.

Collecting survey data from the Internet. The process of obtaining evaluation information by surveying Internet users is still in its infancy. Little information is available regarding the characteristics of survey respondents and nonrespondents and the logistical aspects of moving from paper/pencil to electronic surveys. Consequently, a number of methodological issues have yet to be studied in a comprehensive way.

Survey response rates. Project staff talked with other providers of on-line career and job posting services such as Career Mosaic. Two had attempted to collect information from its users -- one effort resulted in a response rate of none, the other in a response rate of one. Information regarding Careers On-Line was presented at the 1996 American Evaluation Association's (AEA) Annual Conference in Atlanta, Georgia. The evaluators in the audience indicated that Careers On-Line staff should be quite satisfied with obtaining 704 baseline surveys; that conducting surveys on the Net is in its infancy and this number is noteworthy. The evaluators at the AEA conference suggested that a realistic approach to calculating a response rate would be to determine the number of e-mail addresses obtained through the Careers On-Line Home Page and to divide the 704 responses by this number. When this was done, the response rate was 63% (based on the 1,123 people who provided their e-mail addresses on the Careers on-Line Home Page).

However, response rates for follow-up surveys were low. Many possible reasons could be given. First, an e-mail address on the first survey was often no longer valid three weeks later and no other address was given (even though it was requested) for follow-up purposes. Thus, many users were simply lost. In addition, the amount of staff resources needed for follow-up telephone calls or mailed surveys was underestimated so that such follow-up was not always possible. A review of the literature on Internet-

mediated surveys indicates that another reason for nonresponse may be that "netculture" tends to view use of the Internet for collection of survey data to be an improper use of the technology (Fisher et al., 1995 and Foster, 1994).

Interpreting satisfaction statistics. In general, the percentage of users satisfied with the service and the average satisfaction ratings were lower than Careers On-Line staff desired or than would usually be expected with other programs offered through Disability Services. So little is known about user satisfaction with Internet services that it is difficult to interpret the statistics obtained. Do the numbers mean that Careers On-Line is "better than most," "about the same as others," or "worse than others." Because the field of survey research using the Internet is in its infancy, it is impossible to know.

The evolving evaluation object. A strength of the project was that staff continually redesigned certain aspects of Careers On-Line and retooled services to maximize system capacities that were evolving because of changes in electronic communications technologies and the development of Netscape. Consequently, the evaluation object was not static. This had implications for the evaluation in that some respondents to the baseline survey and the three-week follow-up survey had interacted with the Careers On-Line database when it was initially developed and did not benefit from the modifications made later in the project. This may mean that they gave satisfaction and outcome information based on experience with an object different from the one that had evolved later in the evaluation. It was decided, however, to combine the user responses because the number responding was low and to further reduce the data would have been problematic.

Another strength was that surveys were revised to reflect changes in Careers On-Line program services. The paper and electronic user surveys were identical and underwent several revisions throughout the history of the project. Both the user survey and the follow-up surveys were fine-tuned throughout the project to reflect the development of Careers On-Line and to more accurately capture user satisfaction and possible user outcomes.

Cost to users. Although some suggest that the cost of using electronic data collection methods is significantly less for the evaluator than traditional telephone, paper, or face-to-face surveying (McKay, 1995 and Chisholms, 1995), others report that there is in fact a cost for the user to respond to surveys. The user purchasing on-line access through a commercial service must allocate some on-line time to this task, a situation that may decrease the likelihood of their responding. Welch et al. (1992) reported that their 30-minute survey cost respondents about $5.00.

Formatting issues. At the time the on-line evaluation was implemented for Careers On-Line, little was known about formatting requirements for electronic surveying. The external evaluator had experience with electronic surveying using software developed by INFORMNS; however, the software used at the University of Minnesota did not conform to this approach. At the beginning of the Careers On-Line project, there were no articles in the literature regarding formatting. Consequently, much time

was spent experimenting with the software available through the University of Minnesota. This held true for both e-mail and World Wide Web surveys. For the surveys to retain their formatting through electronic mail, the formatting in Microsoft Word had to be precise. Courier font in 10-point had to be used, each line could be no more than 70 characters, and one needed a hard carriage return at the end of each line. Formatting options like underline or bold could not be used for a survey sent through e-mail.

User response problems. Although detailed instructions were sent to users on how to return the e-mailed surveys, many users were unable to respond electronically. In some cases their postal addresses were given and surveys were sent through the mail. Some casual users, especially those using Lynx to access the WWW, were unable to respond to the survey.

Maintaining electronic surveys. Keeping track of this large quantity of electronic surveys was problematic. There were three different survey types (baseline, three-week follow-up, and six-month follow-up) for four different target groups (core users, casual users, career service providers, and employers). In addition, users often completed a user survey on the Web and also submitted their e-mail addresses. To make sure that a user was not sent another copy of the survey, each e-mail address had to be checked against the surveys submitted through the Web, a process that proved extremely time consuming and tedious. At the time of the Careers On-Line project, no software was available to make this process less cumbersome.

Statistical software interface. Each survey had to be printed and the data entered into SPSS. With more than 700 surveys, this was very time consuming. A software program was available whereby incoming quantitative electronic data could be inputted directly into a database like SPSS. However, project staff didn't initiate a direct input of data into SPSS because it would have required changing e-mail programs from Quickmail to Unix. Project staff would not have been able to keep such a close linkage to the follow up surveys had the change been made to Unix. All the reminder surveys would not have been sent automatically, leaving a large amount of work for project staff to do with even less control. Also, many open-ended questions would not have worked with direct input.

Survey software. Many of the issues regarding the mechanics of conducting an on-line survey could have been avoided with survey software; however, Careers On-Line was ahead of its time. An exhaustive search of the literature and an on-line search conducted in the spring and summer of 1996 revealed that such software had become available only within the last few months of the grant period.

Electronic survey responses. Electronic survey responses increased the data available regarding Careers On-Line. Before utilizing electronic communications for evaluation purposes, paper surveys were used to collect data from core users. After the first six months of the project, staff had collected 23 paper surveys from students with disabilities at the University of Minnesota who had used the computer labs. One year later, after using

e-mail and the World Wide Web for collecting data, over 700 surveys had been collected from both core and casual users.

Nonrespondent survey. It was hoped that there would be time and resources to conduct a nonrespondent study to determine if nonrespondents to the survey instruments varied in any way. A graduate student, who was a Careers On-Line staff member, proposed such a study to the University of Minnesota Human Subjects Committee. The committee denied the requst, stating that subjects had to be allowed to passively decline participation, not actively decline. At the 1996 AEA conference, evaluators expressed concern regarding this policy. Statistical adjustments in survey responses can be made only if characteristics of nonrespondents are known. All survey research texts recommend that follow-up studies be conducted on nonrespondents. The evaluators at the AEA conference believed that barriers to conducting nonrespondent studies may greatly decrease the effectiveness of survey research and evaluation.

Careers On-Line is a pioneering effort. The Careers On-Line session at the 1996 AEA Annual Conference titled, "The Next Evaluation Frontier, The Internet" was attended by 30 individuals interested in obtaining information regarding the use of the Internet to collect evaluation information. Dr. William Trochim, professor at Cornell University, reported that the Careers On-Line experiences with Internet-mediated surveys was consistent with those of evaluators at Cornell University. He and Jonathan Morell, Industrial Technology Institute, suggested that Careers On-Line publish its findings so others can learn from these experiences.

APPENDIX B

DATA COLLECTION INSTRUMENTS

- Baseline Survey
- 3 Week Survey for all Four Groups
- Six Month Survey for all Four Groups
- Interview Protocol
- Mentoring Database Information Form

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Careers On-Line User Survey
Disability Services

This survey is available in alternate format on request. Contact Careers On-Line at 612-626-9649.

Careers On-Line is a federally-funded project of Disability Services at the University of Minnesota. We appreciate your taking the time to complete this survey. The responses will help us to better know who we are serving and allow us to meet your needs more effectively.

Your responses to the survey are confidential. Identifying information will be used for follow-up purposes only. Your responses will be grouped with others.

Date: _____
Name: _____
E-Mail Address: _____
Mailing Address: _____
_____
Phone number: _____
Major: _____
Computer Usage: Mac _____
IBM _____
Other _____

☐ Registered with Disability Services - active
☐ Registered with Disability Services - inactive
☐ Not registered with Disability Services

Directions: Please carefully read and answer the following questions.

1. Where did you learn about our services? (Mark all that apply)
   - ☐ a. Career Connections referral
   - ☐ b. Careers On-Line brochure
   - ☐ c. Great Lakes Disability and Business Technical Assistance Center brochure
   - ☐ d. Disability Dispatch Newsletter
   - ☐ e. Career Connections Newsletter
   - ☐ f. Minnesota Daily
   - ☐ g. Counselor
   - ☐ h. Friend/Word of mouth
   - ☐ i. Seminar/Workshop
   - ☐ j. Other (Please specify): _____

2. Which one of the following best describes you?
   - ☐ a. Employer
   - ☐ b. Career Service Provider/Educator
   - ☐ c. Job Seeker
   - ☐ d. Student

3. How often do you use electronic mail?
   - ☐ a. Daily
   - ☐ b. Weekly
   - ☐ c. Monthly
   - ☐ d. Less than once per month
   - ☐ e. Never

4. How often do you use other Internet tools (e.g., WWW, USENET, Gopher, ftp, etc.)?
   - ☐ a. Daily
   - ☐ b. Weekly
   - ☐ c. Monthly
   - ☐ d. Less than once per month
   - ☐ e. Never

5. Where do you usually use the Internet? (Mark all that apply)
   - ☐ a. On campus
   - ☐ b. At home
   - ☐ c. At work
   - ☐ d. Other (Please specify): _____

If you are an employer or service provider/educator, please answer item 6 then skip to item 12.

6. What do you hope to gain from using the Careers On-Line Services? (Mark all that apply)
   - ☐ a. Information/job leads for clients with disabilities
   - ☐ b. Information about job accommodations
   - ☐ c. Information about adaptive technology
   - ☐ d. Information about disability services
   - ☐ e. Other (Please specify): _____

If you are a job seeker and/or student, please answer the following questions.

7. Which of the following best describes your current employment status?
   - ☐ a. Unemployed, looking for work
   - ☐ b. Unemployed, not currently looking for work
   - ☐ c. Working in a paying position for_____ hours/week
   - ☐ d. Working as a volunteer for _____ hours/week
   - ☐ e. Working in a non-paying internship for _____ hours/week
   - ☐ f. Other (Please specify): _____

8. If you are a student, what is your current status in school?
   - ☐ a. First Year in College
   - ☐ b. Sophomore in College
   - ☐ c. Junior in College
   - ☐ d. Senior in College
   - ☐ e. Graduate/Professional School
   - ☐ f. Extension or Non-Degree Student
   - ☐ g. Other (Please specify): _____

9. If you are a student, please indicate the school that you currently attend:
   _____

10. If you are NOT a student, what is your current status?
   - ☐ a. Graduate of the University of Minnesota
   - ☐ b. Graduate of another institution (Please specify): _____
   - ☐ c. Former student, did not graduate
   - ☐ d. Other (Please specify): _____

11. What do you hope to gain from using the Careers On-Line Services? (Mark all that apply)
   - ☐ a. Part-time job leads
   - ☐ b. Full-time job leads
   - ☐ c. Internship leads
   - ☐ d. Co-op leads
   - ☐ e. Contacts for mentors (meet with professionals on an extended basis)
   - ☐ f. Contacts for informational interviewing (interviewing professionals about specific careers)
   - ☐ g. Contacts for job shadowing (spend a day on the job with a professional)
   - ☐ h. Information about job accommodations
   - ☐ i. Information about adaptive technology products
   - ☐ j. Information about disability services
   - ☐ k. Other (Please specify): _____

12. Gender:
   - ☐ a. Male
   - ☐ b. Female

13. Ethnic Background:
   - ☐ a. African American
   - ☐ b. Native American/Alaskan Native
   - ☐ c. Asian/Pacific Islander
   - ☐ d. European American
   - ☐ e. Hispanic
   - ☐ f. Other (Please Specify): _____

14. Do you have a disability?
    - ☐ a. Yes
    - ☐ b. No

15. If yes, what is your primary disability?
    - ☐ a. Blind or visually impaired
    - ☐ b. Deaf or hard of hearing
    - ☐ c. Speech impairment
    - ☐ d. Chronic illness
    - ☐ e. Head injury
    - ☐ f. Mobility/Coordination impairment
    - ☐ g. Learning disability
    - ☐ h. Psychiatric disability
    - ☐ i. Other (Please Specify): _____

Thank you for your time and cooperation.
Your responses are very important to us.

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Careers On-Line Student/Job Seeker Follow-Up Survey
Disability Services

This survey is available in alternate format on request. Contact Careers On-Line at 612-626-9649.

Careers On-Line is a federally-funded project of Disability Services at the University of Minnesota. We appreciate your taking the time to complete this survey. The responses will help us to better know who we are serving and allow us to meet your needs more effectively.

Your responses to the survey are confidential. Identifying information will be used for follow-up purposes only. Your responses will be grouped with others.

Date _____

Directions: Please carefully read and answer the following questions.

1. How often do you use electronic mail?
   - ☐ a. Daily
   - ☐ b. Weekly
   - ☐ c. Monthly
   - ☐ d. Less than once per month
   - ☐ e. Never

2. How often do you use other Internet tools (e.g., WWW, USENET, Gopher, ftp, etc.)?
   - ☐ a. Daily
   - ☐ b. Weekly
   - ☐ c. Monthly
   - ☐ d. Less than once per month
   - ☐ e. Never

3. Where do you usually use the Internet? (e.g., electronic mail, WWW, USENET, Gopher, ftp, etc)? *(Mark all that apply)*
   - ☐ a. On campus
   - ☐ b. At home
   - ☐ c. At work
   - ☐ d. Other (Please specify): _____

4. Have you used Careers On-Line since you filled out the Careers On-Line User Survey?
   - ☐ a. Yes
   - ☐ b. No

   If no, why not? _____
   _____
   _____

5. How many times have you used Careers On-Line?
   - ☐ a. Once
   - ☐ b. Twice
   - ☐ c. 3 to 5 times
   - ☐ d. 6 to 10 times
   - ☐ e. More than 10 times

6. When was the last time you used Careers On-Line?
   - ☐ a. Within the last week
   - ☐ b. Within the last 4 weeks
   - ☐ c. 1 to 2 months ago
   - ☐ d. 3-5 months ago
   - ☐ e. 6-7 months ago
   - ☐ f. More than 7 months ago

7. Directions: Please indicate your level of satisfaction with Careers On-Line services.

	Didn't Use	Very Dissatisfied				Very Satisfied
Overall Careers On-Line Service	0	1	2	3	4	5
Adaptive Technology Products & Resources	0	1	2	3	4	5
Careers On-Line Job Postings	0	1	2	3	4	5
Other Job Postings	0	1	2	3	4	5
Resume Information	0	1	2	3	4	5
Job Accommodation Handbook	0	1	2	3	4	5
Career Development Resources at the U of M (e.g., Career Connections, UCCS)	0	1	2	3	4	5
Other (Please specify): _____	0	1	2	3	4	5

Comments: _____

_____

_____

8. Please indicate other career services you learned about and/or used as **a result of using Careers On-Line.**

Other Career Services	Learned About	Used
University of Minnesota Career Connections		
Job Listings from Online Career Center		
JAN (Job Accommodation Network)		
Postings from FedJobs		
Career Mosaic		
JobWeb		
Other (Please, specify) _____		

Directions: The following questions focus on information, leads, interviews, and positions you have received as **a result of using Careers On-Line** and/or Other Career services ACCESSED through Careers On-Line.

9. **As a result of using Careers On-Line:**

Did you find information on **job accommodations**?
Yes_____ No _____ Wasn't looking for this information _____

Did you find information on **adaptive technology**?
Yes _____ No _____ Wasn't looking for this information _____

Did you find information on **disability services**?
Yes_____ No _____ Wasn't looking for this information _____

10. **As a result of using Careers On-Line**:

Have you found any job/internship leads?
Yes _____ No _____ Wasn't looking for this information _____

If yes, then please indicate **how many of each type** of lead you have actively pursued?

_____ Full time job leads
_____ Part time job leads
_____ Internship leads
_____ Co-op leads
_____ Other (please specify)_____

Have you had any job interviews **from leads found through Careers On-Line**?
Yes _____ No _____ N/A _____

If yes, then please indicate **how many of each type** of interview you have had?

_____ Full time job interviews
_____ Part time job interviews
_____ Internship interviews
_____ Co-op interviews
_____ Other (please specify)_____

Have you been offered positions **from leads you found through Careers On-Line**?
Yes _____ No _____ N/A _____

If yes, then please indicate **which type of position** you have accepted.

_____ Full time job position: Job Title _____
_____ Part time job position: Job Title _____
_____ Internship position
_____ Co-op position
_____ Other (please specify)_____

11. In what ways, if any, has Careers On-Line benefited you?

12. Please list any problems you have had using Careers On-Line services.

13. What can Careers On-Line do to improve its services?

Thank you for your time and cooperation.
Your responses are very important to us.

UNIVERSITY OF MINNESOTA

Careers On-Line Employer Follow-Up Survey

Disability Services

This survey is available in alternate format on request. Contact Careers On-Line at 612-626-9649.

Careers On-Line is a federally-funded project of Disability Services at the University of Minnesota. We appreciate your taking the time to complete this survey. The responses will help us to better know who we are serving and allow us to meet your needs more effectively.

Your responses to the survey are confidential. Identifying information will be used for follow-up purposes only. Your responses will be grouped with others.

Date _____

Directions: Please carefully read and answer the following questions.

1. How often do you use electronic mail?
   - ☐ a. Daily
   - ☐ b. Weekly
   - ☐ c. Monthly
   - ☐ d. Less than once per month
   - ☐ e. Never

2. How often do you use other Internet tools (e.g., WWW, USENET, Gopher, ftp, etc.)?
   - ☐ a. Daily
   - ☐ b. Weekly
   - ☐ c. Monthly
   - ☐ d. Less than once per month
   - ☐ e. Never

3. Where do you usually use the Internet? (e.g., electronic mail, WWW, USENET, Gopher, ftp, etc)? *(Mark all that apply)*
   - ☐ a. On campus
   - ☐ b. At home
   - ☐ c. At work
   - ☐ d. Other (Please specify): _____

4. Have you used Careers On-Line since you filled out the Careers On-Line User Survey?
   - ☐ a. Yes
   - ☐ b. No

   If no, why not? _____
   _____
   _____

5. How many people have applied to your organization for jobs **as a result of postings on Careers On-Line**? _____

   Of these, how many were offered positions? _____

6. How many people have applied to your organization for internships **as a result of postings on Careers On-Line**? _____

   Of these, how many were offered positions? _____

7. How many people have applied to your organization for co-op **opportunities as a result of postings on Careers On-Line**? _____

   Of these, how many were offered positions? _____

8. How many times have you used our services?
   - ☐ a. Once
   - ☐ b. Twice
   - ☐ c. 3 to 5 times
   - ☐ d. 6 to 10 times
   - ☐ e. More than 10 times

9. When was the last time you used Careers On-Line?
   - ☐ a. Within the last week
   - ☐ b. Within the last 4 weeks
   - ☐ c. 1 to 2 months ago
   - ☐ d. 3-5 months ago
   - ☐ e. 6-7 months ago
   - ☐ f. More than 7 months ago

10. **As a result of using Careers On-Line:**

Did you find information on **job accommodations**?
Yes_____ No _____ Wasn't looking for this information _____

Did you find information on **adaptive technology**?
Yes _____ No _____ Wasn't looking for this information _____

Did you find information on **disability services**?
Yes_____ No _____ Wasn't looking for this information _____

11. Directions: Please indicate your level of satisfaction with Careers On-Line Services.

	Didn't Use	Very Dissatisfied				Very Satisfied
Overall Careers On-Line Service	0	1	2	3	4	5
Adaptive Technology Products & Resources	0	1	2	3	4	5
Careers On-Line Job Postings	0	1	2	3	4	5
Other Job Postings	0	1	2	3	4	5
Resume Information	0	1	2	3	4	5
Job Accommodation Handbook	0	1	2	3	4	5
Career Development Resources at the U of M (e.g., Career Connections, UCCS)	0	1	2	3	4	5
Other (Please specify): _____	0	1	2	3	4	5

Comments: _____
_____
_____

over

12. Please indicate other career services you learned about and/or used **as a result of using Careers On-Line**.

Other Career Services	Learned About	Used
University of Minnesota Career Connections	☐	☐
Job Listings from Online Career Center	☐	☐
JAN (Job Accommodation Network)	☐	☐
Postings from FedJobs	☐	☐
Career Mosaic	☐	☐
JobWeb	☐	☐
Other (Please, specify) _____	☐	☐

13. In what ways, if any, has Careers On-Line benefited you?

14. Please list any problems you have had using Careers On-Line services.

15. What can Careers On-Line do to improve its services?

Thank you for your time and cooperation.
Your responses are very important to us.

UNIVERSITY OF MINNESOTA

Careers On-Line Career Service Provider/Educator Follow-Up Survey

Disability Services

This survey is available in alternate format on request. Contact Careers On-Line at 612-626-9649.

Careers On-Line is a federally-funded project of Disability Services at the University of Minnesota. We appreciate your taking the time to complete this survey. The responses will help us to better know who we are serving and allow us to meet your needs more effectively.

Your responses to the survey are confidential. Identifying information will be used for follow-up purposes only. Your responses will be grouped with others.

Date _____

Directions: Please carefully read and answer the following questions.

1. How often do you use electronic mail?
   - ☐ a. Daily
   - ☐ b. Weekly
   - ☐ c. Monthly
   - ☐ d. Less than once per month
   - ☐ e. Never

2. How often do you use other Internet tools (e.g., WWW, USENET, Gopher, ftp, etc.)?
   - ☐ a. Daily
   - ☐ b. Weekly
   - ☐ c. Monthly
   - ☐ d. Less than once per month
   - ☐ e. Never

3. Where do you usually use the Internet? (e.g., electronic mail, WWW, USENET, Gopher, ftp, etc)? *(Mark all that apply)*
   - ☐ a. On campus
   - ☐ b. At home
   - ☐ c. At work
   - ☐ d. Other (Please specify): _____

4. Have you used Careers On-Line since you filled out the Careers On-Line User Survey?
   - ☐ a. Yes
   - ☐ b. No

   If no, why not? _____
   _____
   _____

5. How many clients have you referred to Careers On-line? _____

6. How many times have you used our services?
   - ☐ a. Once
   - ☐ b. Twice
   - ☐ c. 3 to 5 times
   - ☐ d. 6 to 10 times
   - ☐ e. More than 10 times

7. When was the last time you used Careers On-Line?
   - ☐ a. Within the last week
   - ☐ b. Within the last 4 weeks
   - ☐ c. 1 to 2 months ago
   - ☐ d. 3-5 months ago
   - ☐ e. 6-7 months ago
   - ☐ f. More than 7 months ago

8. Directions: Please indicate your level of satisfaction with Careers On-Line Services.

	Didn't Use	Very Dissatisfied				Very Satisfied
Overall Careers On-Line Service	0	1	2	3	4	5
Adaptive Technology Products & Resources	0	1	2	3	4	5
Careers On-Line Job Postings	0	1	2	3	4	5
Other Job Postings	0	1	2	3	4	5
Resume Information	0	1	2	3	4	5
Job Accommodation Handbook	0	1	2	3	4	5
Career Development Resources at the U of M (e.g., Career Connections, UCCS)	0	1	2	3	4	5
Other (Please specify): _____	0	1	2	3	4	5

Comments: _____

_____

_____

9. **As a result of using Careers On-Line:**

Did you find information on **job accommodations**?
Yes_____ No _____ Wasn't looking for this information _____

Did you find information on **adaptive technology**?
Yes _____ No _____ Wasn't looking for this information _____

Did you find information on **disability services**?
Yes_____ No _____ Wasn't looking for this information _____

10. Please indicate other career services you learned about and/or used **as a result of using Careers On-Line**.

Other Career Services	Learned About	Used
University of Minnesota Career Connections	☐	☐
Job Listings from Online Career Center	☐	☐
JAN (Job Accommodation Network)	☐	☐
Postings from FedJobs	☐	☐
Career Mosaic	☐	☐
JobWeb	☐	☐
Other (Please, specify) _____	☐	☐

11. Have you ever used Careers On-Line to look for job leads for your clients?
    - ☐ a. Yes
    - ☐ b. No

12. If yes, how many leads have you obtained as a result of using Careers On-Line? _____

13. In what ways, if any, has Careers On-Line benefited you?

14. Please list any problems you have had using Careers On-Line services.

15. What can Careers On-Line do to improve its services?

Thank you for your time and cooperation.
Your responses are very important to us.

UNIVERSITY OF MINNESOTA

Careers On-Line Student/Job Seeker Six-Month Follow-Up Survey

Disability Services

This survey is available in alternate format on request. Contact Careers On-Line at 612-626-9649.

Careers On-Line is a federally-funded project of Disability Services at the University of Minnesota. For more information on our services, please refer to the attached handout which summarizes the services available through Careers On-Line. Or, visit our World Wide Web site at: http://www.disserv.stu.umn.edu/TC/Grants/COL/

Your responses to the survey are confidential and will be grouped with others.

We appreciate your taking the time to complete this survey.

Date _____

Directions: Please carefully read and answer the following questions.

1. How many times have you used Careers On-Line services?
- ☐ a. Once
- ☐ b. Twice
- ☐ c. 3 to 5 times
- ☐ d. 6 to 10 times
- ☐ e. More than 10 times

2. When was the last time you used Careers On-Line?
- ☐ a. Within the last week
- ☐ b. Within the last 4 weeks
- ☐ c. 2 to 3 months ago
- ☐ d. 4 - 5 months ago
- ☐ e. 6 -7 months ago
- ☐ f. More than 7 months ago

3. **As a result of using Careers On-Line**:

Did you find information on **job accommodations**?
Yes ____ No ____ Wasn't looking for this information ____

Did you find information on **adaptive technology**?
Yes ____ No ____ Wasn't looking for this information ____

Did you find information on **disability services**?
Yes ____ No ____ Wasn't looking for this information ____

CONTINUE

4. **As a result of using Careers On-Line:**

Have you found any job/internship **leads**?
Yes _____ No _____ Wasn't looking for this information _____

If yes, please indicate **how many of each type** of lead have you actively pursued?
_____ Full-time job leads
_____ Part-time job leads
_____ Internship leads
_____ Co-op leads
_____ Other (please specify)

Have you had any job **interviews** from leads you found through Careers On-Line?
Yes _____ No _____ Wasn't looking for this information _____

If yes, please indicate **how many of each type** of interview you have had?
_____ Full-time job interviews
_____ Part-time job interviews
_____ Internship interviews
_____ Co-op interviews
_____ Other (please specify)

Have you been offered **positions** from leads you found through Careers On-Line?
Yes _____ No _____ Wasn't looking for this information _____

If yes, please indicate **which type of position** you have been offered?
_____ Full-time job position: Job Title:_____
_____ Part-time job position: Job Title:_____
_____ Internship position
_____ Co-op position
_____ Other (please specify)

5. In what ways, if any, has Careers On-Line benefited you?

6. Approximately three weeks after filling out a Careers On-Line User Survey you completed a Follow-Up Survey. Have you used Careers On-Line since you filled out the Follow - Up Survey?
☐ a. Yes (**Please turn the page and answer the last questions**)
☐ b. No
If no, why not? _____
_____

If you answered 'no' to question 6, you do not need to proceed with the survey. Thank you very much for participating in the evaluation of Careers On-Line!

7. Directions: Please indicate your level of satisfaction with Careers On-Line services.

	Didn't Use	Very Dissatisfied				Very Satisfied
Overall Careers On-Line Service	0	1	2	3	4	5
Adaptive Technology Products & Resources	0	1	2	3	4	5
Careers On-Line Job Postings	0	1	2	3	4	5
Other Job Postings	0	1	2	3	4	5
Resume Information	0	1	2	3	4	5
Job Accommodation Handbook	0	1	2	3	4	5
Career Development Resources at the U of M (e.g., Career Connections, UCCS)	0	1	2	3	4	5
Other (Please specify): _____	0	1	2	3	4	5

Comments: _____

8. Please list any problems you have had using Careers On-Line services.

9. What can Careers On-Line do to improve its services?

Thank you for your time and cooperation.
Your responses are very important to us.

UNIVERSITY OF MINNESOTA

Careers On-Line Employer Six-Month Follow-Up Survey

Disability Services

This survey is available in alternate format on request. Contact Careers On-Line at 612-626-9649.

Careers On-Line is a federally-funded project of Disability Services at the University of Minnesota. For more information on our services, please refer to the attached handout which summarizes the services available through Careers On-Line. Or, visit our World Wide Web site at: http://www.disserv.stu.umn.edu/TC/Grants/COL/

Your responses to the survey are confidential and will be grouped with others.

We appreciate your taking the time to complete this survey.

Date _____

Directions: Please carefully read and answer the following questions.

1. How many times have you used Careers On-Line services?
   - ☐ a. Once
   - ☐ b. Twice
   - ☐ c. 3 to 5 times
   - ☐ d. 6 to 10 times
   - ☐ e. More than 10 times

2. When was the last time you used Careers On-Line?
   - ☐ a. Within the last week
   - ☐ b. Within the last 4 weeks
   - ☐ c. 2 to 3 months ago
   - ☐ d. 4 - 5 months ago
   - ☐ e. 6 -7 months ago
   - ☐ f. More than 7 months ago

3. **As a result of using Careers On-Line**:

Did you find information on **job accommodations**?
Yes ____ No ____ Wasn't looking for this information ____

Did you find information on **adaptive technology**?
Yes ____ No ____ Wasn't looking for this information ____

Did you find information on **disability services**?
Yes ____ No ____ Wasn't looking for this information ____

CONTINUE

4. As far as you know, how many people, if any, have applied to your organization for jobs **as a result of postings on Careers On-Line**? _____

Of these, how many were offered positions? _____

5. As far as you know, how many people, if any, have applied to your organization for internships **as a result of postings on Careers On-Line**? _____

Of these, how many were offered positions? _____

6. As far as you know, how many people, if any, have applied to your organization for co-op opportunities **as a result of postings on Careers On-Line**? _____

Of these, how many were offered positions? _____

7. Approximately three weeks after filling out a Careers On-Line User Survey you completed a Follow-Up Survey. Have you used Careers On-Line since you filled out the Follow - Up Survey?
   - ☐ a. Yes (**Please go to question 8**)
   - ☐ b. No

   If no, why not? _____
   _____

If you answered 'no' to question 7, you do not need to proceed with the survey. Thank you very much for participating in the evaluation of Careers On-Line!

8. In what ways has Careers On-Line benefited you?

9. Please list any problems you have had using Careers On-Line services.

CONTINUE

10. Directions: Please indicate your level of satisfaction with Careers On-Line services.

	Didn't Use	Very Dissatisfied				Very Satisfied
Overall Careers On-Line Service	0	1	2	3	4	5
Adaptive Technology Products & Resources	0	1	2	3	4	5
Careers On-Line Job Postings	0	1	2	3	4	5
Job Accommodation Handbook	0	1	2	3	4	5
Career Development Resources at the U of M (e.g., Career Connections, UCCS)	0	1	2	3	4	5
Other (Please specify): _____	0	1	2	3	4	5

Comments: _____

_____

11. What can Careers On-Line do to improve its services?

Thank you for your time and cooperation.
Your responses are very important to us.

UNIVERSITY OF MINNESOTA

Careers On-Line Career Service Provider/Educator Six-Month Follow-Up Survey

Disability Services

This survey is available in alternate format on request. Contact Careers On-Line at 612-626-9649.

Careers On-Line is a federally-funded project of Disability Services at the University of Minnesota. For more information on our services, please refer to the attached handout which summarizes the services available through Careers On-Line. Or, visit our World Wide Web site at: http://www.disserv.stu.umn.edu/TC/Grants/COL/

Your responses to the survey are confidential and will be grouped with others.

We appreciate your taking the time to complete this survey.

Date _____

Directions: Please carefully read and answer the following questions.

1. How many times have you used Careers On-Line services?
   - ☐ a. Once
   - ☐ b. Twice
   - ☐ c. 3 to 5 times
   - ☐ d. 6 to 10 times
   - ☐ e. More than 10 times

2. When was the last time you used Careers On-Line?
   - ☐ a. Within the last week
   - ☐ b. Within the last 4 weeks
   - ☐ c. 2 to 3 months ago
   - ☐ d. 3-5 months ago
   - ☐ e. 6-7 months ago
   - ☐ f. More than 7 months ago

3. **As a result of using Careers On-Line**:

Did you find information on **job accommodations**?
Yes ____ No ____ Wasn't looking for this information ____

Did you find information on **adaptive technology**?
Yes ____ No ____ Wasn't looking for this information ____

Did you find information on **disability services**?
Yes ____ No ____ Wasn't looking for this information ____

4. How many clients have you referred to Careers On-Line? _____

CONTINUE

5. Have you ever used Careers On-Line to look for job leads for your clients?

☐ a. Yes
☐ b. No

6. If yes, how many leads have you obtained as a result of using Careers On-Line? _____

7. Approximately three weeks after filling out a Careers On-Line User Survey you completed a Follow-Up Survey. Have you used Careers On-Line since you filled out the Follow - Up Survey?

☐ a. Yes (**Please go to question 8**)
☐ b. No

If no, why not? _____

_____

If you answered 'no' to question 7, you do not need to proceed with the survey. Thank you very much for participating in the evaluation of Careers On-Line!

8. Directions: Please indicate your level of satisfaction with Careers On-Line services.

	Didn't Use	Very Dissatisfied				Very Satisfied
Overall Careers On-Line Service	0	1	2	3	4	5
Adaptive Technology Products & Resources	0	1	2	3	4	5
Careers On-Line Job Postings	0	1	2	3	4	5
Other Job Postings	0	1	2	3	4	5
Resume Information	0	1	2	3	4	5
Job Accommodation Handbook	0	1	2	3	4	5
Career Development Resources at the U of M (e.g., Career Connections, UCCS)	0	1	2	3	4	5
Other	0	1	2	3	4	5

(Please specify): _____

Comments: _____

CONTINUE

9. In what ways has Careers On-Line benefited you?

10. Please list any problems you have had using Careers On-Line services.

11. What can Careers On-Line do to improve its services?

Thank you for your time and cooperation.
Your responses are very important to us.

Careers On-Line
Interview Protocol

General Introduction:

My name is and I'm working on an evaluation of the Careers On-Line program at the University of Minnesota. I called earlier to schedule this time for me to talk with you about your experience in the program.

The purpose of this interview is to understand how you and other participants assess Careers On-Line. The interview usually takes about 20 minutes or less. Your remarks are confidential and will be combined with those of other participants. Information from the interview will be used to help improve the quality of the program.

Is it OK I tape the interview?
Do you have any questions before we begin?

INDICATE NOW TAPE IS TURNED ON

Question List-Low Involvement-CORE Users

(1) At the time you began using Careers On-Line, you participated in a training session showing you the various databases.

(1a) Describe that experience for me. (What happened? How did you find it? What happened when you got to the site?)

When was the last time you used a Careers On-Line database?

(1b) In what ways has Careers On-Line been useful to you?

(1c) Was the Job and Internship database helpful to you? (i.e. in identifying appropriate leads)

Were links to other job search databases helpful to you?

If so, in what ways?

If not, why not?

(1d) Was the Adaptive Technology Products and Resources database helpful to you? (i.e. in identifying accommodations)

If so, in what ways?

If not, why not?

(1e) Was the Resume Information database helpful to you? (i.e. in writing and/or posting resumes)

If so, in what ways?

If not, why not?

(1f) Was the Job Accommodation Information database helpful to you? (i.e. in learning about job accommodations and disclosure issues)

If so, in what ways?

If not, why not?

(1g) Was the Career and Educational Planning Resources database helpful

to you? (i.e. in locating career information)

If so, in what ways?

If not, why not?

(2) Following your initial training you have chosen not to participate in Careers On-Line. Tell me more about what prevented you from using COL more often?

(3) How accessible was Careers On-Line for you (i.e. consider such things as accessibility, availability of computers, training, cost of accessing Careers On-Line)?

(4) What could Careers On-Line do differently to better meet the needs of students with disabilities?

Those are all questions I have. Do you have any comments you'd like to add about Careers On-Line?

Thanks very much for your time. I appreciate your help.

Question List-High Involvement-CORE Users

(1) At the time you began using Careers On-Line, you participated in a training session showing you the various databases.

(1a) Describe that experience for me. (What happened? How did they find it? What happened when they got to the site?)

When was the last time you used a Careers On-Line database?

(1b) In what ways has Careers On-Line been useful to you?

(1c) Was the Job and Internship database helpful to you in identifying appropriate leads?

If so, in what ways?

If not, why not?

Were links to other job search databases helpful to you?

(1d) Was the Adaptive Technology Products and Resources database helpful to you? (i.e. in identifying accommodations)

If so, in what ways?

If not, why not?

(1e) Was the Resume Information database helpful to you? (i.e. in writing and/or posting resumes)

If so, in what ways?

If not, why not?

(1f) Was the Job Accommodation Information database helpful to you? (i.e. in learning about job accommodations and disclosure issues)

If so, in what ways?

If not, why not?

(1g) Was the Career and Educational Planning Resources database helpful to you? (i.e. in locating career information)

If so, in what ways?

If not, why not?

(2) How accessible was Careers On-Line for you (i.e. consider such things as accessibility, availability of computers, training, cost of accessing Careers On-Line)?

(3) Let's talk for a minute about what difference Careers On-Line has made for you. Have you taken any action based on the information obtained from Careers On-Line?

(4) What would you describe as the benefits of using the Internet in the career process?

(5) What could Careers On-Line do differently to better meet the needs of students with disabilities?

Those are all questions I have. Do you have any comments you'd like to add about Careers On-Line?

Thanks very much for your time. I appreciate your help.

Careers On-Line Casual Users
Low Involvement and High Involvement

1. How did you learn about Careers On-Line?

2. What attracted you to our Internet site?

   (2a) In what ways has Careers On-Line been useful to you?

   (2b) Was the Job and Internship database helpful to you? (i.e in identifying appropriate leads)

   If so, in what ways?

   If not, why not?

   Were links to other job search databases helpful to you?

   (2c) Was the Adaptive Technology Products and Resources database helpful to you? (i.e in identifying accommodations)

   If so, in what ways?

   If not, why not?

   (2d) Was the Resume Information database helpful to you? (i.e in writing and/or posting resumes)

   If so, in what ways?

   If not, why not?

   (2e) Was the Job Accommodation Information database helpful to you? (in learning about job accommodations and disclosure issues)

   If so, in what ways?

   If not, why not?

   (2f) Was the Career and Educational Planning Resources database helpful to you? (i.e in locating career information)

   If so, in what ways?

   If not, why not?

3. Did you find yourself coming back to a specific database?

If so, which one?

4. Are there other services similar to Careers On-Line that you find more helpful?

If so, in what ways?

If not, why not?

5. In what ways has Careers On-Line benefited you?

6. What, if anything about Careers On-Line would you change?

Why?

Those are all questions I have. Do you have any comments you'd like to add about Careers On-Line?

Thanks very much for your time. I appreciate your help.

UNIVERSITY OF MINNESOTA

Careers On-Line

Disability Services

Informational Interviewing/ Informal Mentoring Database

Name: _____

Job Title: _____

Major Job Responsibilities: _____

_____

_____

Place of Employment: _____

Work Address: _____

Work Phone: _____

E-Mail Address: _____

Home Address (optional): _____

_____

Home Phone (optional): _____

_____ I would prefer that students contact me by phone.

_____ I would prefer that students contact me by mail.

_____ I would prefer that students contact me by E-mail.

_____ I have no preference.

What other career areas would you feel comfortable discussing with a student?

Please describe your experience in these fields.

I grant my permission to Careers On-Line staff to give my name and contact information to University of Minnesota students registered with Disability Services.

Please sign and return this form to:

Careers On-Line
Disability Services
University of Minnesota
12 Johnston Hall
101 Pleasant Street S.E.
Minneapolis, MN 55455

APPENDIX C

COL TRAINING

- Training Report
- Training Evaluations

Trainings

Date	Title/Topic	Presenter(s)	Audience	Attendance
R&D (Careers Online)				
Conferences				
10/22/94	Careers On-Line	*Battaglia, Fitzgerald, Griesel*	Closing the Gap National Conference	*40*
6/1/95	Best Practices Showcase	*Weir*	National Association of Colleges & Employers (NACE)	*600*
6/8/95	Careers On-Line	*Aune, Weir*	Project Directors Meeting, U.S. Dept. of Education	*200*
7/27/95	Disability Services in the Library	*Griesel*	Minnesota Library Association	*50*
9/6/95	Employment Information on the Internet	*Fitzgerald, Griesel, Weir*	Midwest College Placement Association	*40*
10/20/95	Careers On-Line: A Curb-Cut on the Information Superhighway	*Aune*	Div. of Career Dev. & Transition, Council on Exceptional Children	*50*
11/3/95	LDM Conference	*Fitzgerald, Griesel*	Learning Disabilities of Minnesota Conference	*30*
3/22/96	Careers On-Line: Using Internet as a Career Development Tool	*Griesel, Johnson*	California State University at Northridge Technology & Disability Conference	*40*
4/22/96	Career Issues	*Johnson, Schrot*	MN AHEAD Members	*35*
6/3/96	Catch the Wave: Surf the 'Net for Career Development and Employment	*Johnson*	President's Committee on Employment of People with Disabilities Conference	*150*
6/5/96	Careers On-Line	*Johnson*	OSER'S Project Directors Meeting	*100*
11/7/96	Surf Your Way to a Job Using the World Wide Web	*Griesel, Johnson*	Minnesota Rehabilitation Counseling Association	*60*
	Count for Conferences	*12*	**Total Attendance for Conferences**	*1,395*
DS Orientations				
9/22/95	DS Student Orientation	*Griesel*	New DS Students	*6*
10/10/95	DS Student Orientation	*Griesel*	New DS Students	*5*

Trainings

Date	Title/Topic	Presenter(s)	Audience	Attendance
	Count for DS Orientations	*2*	**Total Attendance for DS Orientations**	*11*
Instruction				
11/2/95	Ergonomic Seating	*Griesel*	U of MN Hospital	*5*
11/9/95	Ergonomic Seating	*Griesel*	U of MN Admissions Office	*4*
12/12/95	Assistive Technology Overview	*Griesel*	St. Anthony Park Home	*10*
	Count for Instruction	*3*	**Total Attendance for Instruction**	*19*
Presentations				
7/1/94	Employment of People with Disabilities	*Battaglia, Brower*	Colle and McVoy	*12*
9/27/94	Adaptive Technology	*Allegra, Battaglia, Griesel*	University Career Development Offices	*45*
10/27/94	ADA and Employment	*Battaglia*	Ramsey County Employers	*12*
10/28/94	ADA and Employment	*Battaglia*	Employees with Disabilities, Ramsey County	*7*
11/8/94	Adaptive Technology	*Battaglia*	State Services for the Blind	*30*
11/15/94	Employment	*Battaglia, Johnson*	State Services for the Blind Employers	*30*
4/12/95	Careers On-Line	*Griesel, Weir*	Career Action Day	*125*
10/11/95	TTY Demonstration	*Griesel*	U of M Services	*25*
11/8/95	Careers On-Line	*Weir*	Salt Lake City Community College	*35*
11/24/95	Careers On-Line	*Weir*	Land O'Lakes/Cenex Employees	*33*
12/6/95	Careers On-Line	*Weir*	First Bank Employees & Management	*25*

Trainings

Date	Title/Topic	Presenter(s)	Audience	Attendance
2/21/96	Adaptive Technology Forum	*Baxter, Juarez, Klein, Lasoff, Thingelstad, Wobschall*	College of Liberal Arts Job Fair Recruiters	*30*
2/28/96	Job Fair Demonstration	*Heisenfelt, Johnson, Lomas, Robertson*	U of MN Students	*100*
4/19/96	Career Action Day - Humphrey Center	*Fitzgerald, Griesel, Johnson, Robertson*	University of Minnesota's Master Students	*100*
	Count for Presentations	*14*	**Total Attendance for Presentations**	*609*
	Count for R&D (Careers Online)	*31*	**Total Attendance for R&D (Careers Online)**	*2,034*
	Grand Total Count	*31*	**Grand Total Attendence**	*2,034*

147

148

Training Evaluations

1.) Careers On-Line: Using the Internet as a Job Search Tool for People with Disabilities - Oct. 22, 1994

0-5 scale

N = 15

	Mean
Handouts?	3.73
Can be applied?	4.13
Presented effectively?	4.47
On-line demonstration effective?	4.47

2.) Partnering through Technology

Workshop evaluation

N=19

0-5 scale

	Mean
Usefulness of info. presented?	4.25
Well-organized presentation?	4.37
Overall rating?	4.40
Visual aids or handouts useful?	4.45
Presenter knowledgeable?	4.55

3.) Internet Training Evaluation

Salt Lake City

N=9

1-5 scale

	Mean
Usefulness of info. presented?	4.56
Visual aids or handouts useful?	4.56
Information presented?	5.00
Presenter style?	5.00

4.) Careers On-Line Training

Evaluation Form

N=7

Scale 1-5

	Mean
How well did this meet expectation?	3.43
How important was this?	4.14
How well will this meet your needs?	4.14

N=9

Scale 1-5

	Mean
How well did this meet expectations?	4.30
How well will this meet your needs?	4.30
How helpful was trainer?	4.70
Usefulness of info. presented?	4.78
Presenter knowledgeable?	4.90

Adaptive Technology Forum - Feb. 21, 1996

N=18

Scale 1-5

	Mean
Presented effectively?	4.05
Can be applied?	4.33

Adaptive Technology Forum - Sept. 27, 1994

N=31

Scale 1-5

	Mean
Can be applied?	4.19
Handouts helpful?	4.23
Presented effectively?	4.77
On-line demonstration effective?	4.81

Adaptive Technology Forum

February 21, 1996

Co-sponsored by University of Minnesota
Careers On-Line and Minnesota Division of Rehabilitation Services

EVALUATION

Directions: Please circle the extent to which you agree or disagree with each statement below.

		Strongly disagree				Strongly agree
1.	The sessions were presented effectively.	1	2	3	4	5
2.	The information can be applied to the work I do.	1	2	3	4	5

3. What were the most useful parts of the Adaptive Technology Forum?

4. What were the least useful parts of the Adaptive Technology Forum?

5. Which breakout sessions did you attend? Do you feel the sessions were useful? Why or why not?

6. Other comments?

APPENDIX D

ADVISORY COMMITTEE

Agendas of Meetings

UNIVERSITY OF MINNESOTA

Disability Services

AGENDA

CAREER CONNECTIONS
ADVISORY COMMITTEE MEETING

October 28, 1992

I. Welcome & Introductions
Sue Kroeger, Principal Investigator & Director of DS

II. Issues to be discussed:
Betty Aune, Project Director
- Ways to evaluate results of project
- Ways to increase student participation
- Prioritizing training audiences
- Ways to ensure continuation of project activities after grant period
- Ways to utilize expertise of advisory committee members

III. Small group discussions

IV. Report to larger group

UNIVERSITY OF MINNESOTA

Disability Services

CAREER CONNECTIONS
ADVISORY COMMITTEE MEETING

May 4, 1993
8:30 - 10:00 AM

I. Welcome and introduction of guests
   Betty Aune, Project Director

II. Brief update on Career Connections (CC) activities
   Evaluation - Betty Aune
   Training - Sue Kroeger
   Student services - Donna Johnson
   Employer network - Ann Heisenfelt
   Disabilities networking lunch - Joyce Anis

III. Student presentations
   Cheryl Zeiszler
   Nancy Chrystmas

IV. Small group brainstorming

V. Feedback to larger group and wrap-up

UNIVERSITY OF MINNESOTA

Disability Services

CAREER CONNECTIONS / CAREERS ON-LINE ADVISORY COMMITTEE MEETING

November 16, 1993
8:30 - 10:00 AM

I. Welcome and introduction of guests
   Betty Aune, Project Director

II. Brief update on project activities
   Evaluation - Betty Aune
   Training and consultation - Rick Battaglia
   Student services - Donna Johnson
   Careers On-Line start-up - Curt Griesel
   Student trainers and consultants- Joyce Anis

III. Team sessions

IV. Feedback to larger group and wrap-up

UNIVERSITY OF MINNESOTA

Disability Services

CAREER CONNECTIONS/CAREERS ON-LINE
ADVISORY COMMITTEE MEETING

February 8, 1994
8:30 - 10:00 AM

I. Welcome and introduction of guests
   Betty Aune

II. Plans for Career Connections after the grant period
   Training - Susan Aase
   Student services and profiles of job seekers - Donna Johnson

III. Introduction to Careers On-Line Services
   Introduction - Rick Battaglia
   Overview - Curt Griesel

IV. Small group brainstorming

V. Feedback to larger group and wrap-up

UNIVERSITY OF MINNESOTA

Disability Services

CAREER CONNECTIONS/CAREERS ON-LINE
ADVISORY COMMITTEE MEETING

May 3, 1994
8:30 - 10:30 AM

I. Welcome and introductions
II. E-mail accounts/using the Internet
III. Hands-on demonstration of Careers On-Line services
IV. Walk over to Humphrey/continental breakfast
V. Feedback on demonstration
VI. Opportunities to participate in Careers On-Line
VII. Career Connections evaluation plans

UNIVERSITY OF MINNESOTA

Disability Services

CAREER CONNECTIONS/CAREERS ON-LINE ADVISORY COMMITTEE MEETING

April 20,1995
8:30 - 10:30 AM

I. Welcome (Refreshments)
II. Thanks to and Recognition of Advisory Committee Members
III. Careers On-Line Survey
IV. Hands-on Demonstration -- Careers On-Line
Internet Gopher
World Wide Web
V. Feedback Group Discussion
VI. Future Committee and Subcommittee Meetings

UNIVERSITY OF MINNESOTA

Disability Services

CAREER CONNECTIONS/CAREERS ON-LINE ADVISORY COMMITTEE MEETING

November 8, 1995
8:30 - 10:30 AM

I. Introductions and Refreshments
II. Career Connections Final Report
III. Discussion of Future Plans
IV. Hands-on Demonstration -- Careers On-Line

APPENDIX E

PRESENTATION AGENDAS

UNIVERSITY OF MINNESOTA

"HIRING A DIVERSE WORKFORCE"
FEBRUARY 15, 1994

Presented by Career Connections, the Office of Equal Opportunity and Affirmative Action, the Student Diversity Institue and the Martin Luther King Program.

Ernestine Bailey
Assistant to the Director
Equal Opportunity & Affirmative Action

Rick Battaglia
Project Coordinator
Career Connections/
Careers On-Line

Linda Wolford
Assistant Director
Student Diversity Institute

Jane Toleno
Student
University of Minnesota

AGENDA

I. Introduction
II. Inclusion Exercise
III. Valuing Diversity
IV. Video "Managing Differences"
V. Americans with Disabilities Act
VI. Three Steps to Diversity
VII. Wrap Up

This workshop was sponsored in part by the Divison of Rehabilitation Services.

Adaptive Technology Forum

February 21, 1996

Co-sponsored by:
University of Minnesota
Careers On-Line
and
Minnesota Division of Rehabilitation Services

AGENDA

8:00 - 8:30 - Registration/Continental Breakfast

8:30 - 9:30 - • James Baxter, Ph.D., Hennepin County/Office of Budget and Finance Information Management and Evaluation Services (Mississippi Room)

9:30 - 10:30 - Breakout Sessions

- **Jamie Thingelstad,** Director of Technology, WebSPAN (Mississippi Room)
- **Rachel Wobschall,** Executive Director, STAR Program (Rooms 307-309)

10:30 - 10:45 - BREAK

10:45 - 11:30 - Breakout Sessions

- **Margaret Klein,** Assistant Director, Disability Services
  Accommodating Employees with Disabilities
  (Mississippi Room)
- **Sue Lasoff,** Access Specialist, Disability Services
  Creating Accessible Work Environments
  (Rooms 307-309)
- **Roberta Juarez,** Disability Specialist, Disability Services
  The History and Culture of Disability
  (Room 325)

11:30 - 12:30 - LIVE Assistive Technology Demonstrations
(Mississippi Room)

California State University, Northridge

"Technology and Persons with Disabilities"

March 22, 1996

Donna Johnson
University of Minnesota
Careers On-Line
Project Coordinator

Curt Griesel
University of Minnesota
Careers On-Line
Technology Coordinator

AGENDA

I. Introduction to Careers On-Line

II. Careers On-Line Demonstration

III. Lessons Learned from Project

IV. Wrap Up /Evaluation

UNIVERSITY OF MINNESOTA

Careers On-Line/Internet Training
170 Anderson Hall
Friday, April 12, 1996

AGENDA

I. Careers On-Line/Internet

   A. Introduction to Internet

   B. Introduction to Careers On-Line

   C. Careers On-Line Usage

   D. Editing Information on Careers On-Line Databases

President's Committee on Employment of People with Disabilities

"Catch the Wave of the Future - Surf the 'Net for Resources on Disability and Employment"

Detroit, Michigan
May 22, 1996

Donna Johnson
University of Minnesota
Careers On-Line
Project Coordinator

AGENDA

I. Introduction to Careers On-Line
II. Careers On-Line Demonstration
III. Lessons Learned from Project
IV. Wrap-Up/Evaluation

UNIVERSITY OF MINNESOTA

Disability Services

"Getting the Word Out: Training, Technical Assistance, and Promotion Strategies That Work!"

PRESENTED AT

The Association of Higher Education and Disability (AHEAD) Conference
New Orleans, Louisiana
July 17, 1996

PRESENTED BY

Susan A. Aase
Assistant Director
University of Minnesota
12 Johnson Hall
101 Pleasant Street S.E.
Minneapolis, MN 55455-0432
(612) 624-9566
e-mail: aasex001@maroon.tc.umn.edu

Donna Johnson
Project Coordinator
University of Minnesota
12 Johnson Hall
101 Pleasant Street S.E.
Minneapolis, MN 55455-0432
(612) 626-8035
e-mail: johns042@maroon.tc.umn.edu

AGENDA

I. Introduction: Strategic Plan
II. Training
III. Technical Assistance
IV. Promotion: Marketing Tools
V. Your Strategic Plan
VI. Wrap Up

SALT LAKE COMMUNITY COLLEGE INTERNET TRAINING

I. Introduction

II. Overview of Disability Services at the U of M
- A. Progressive Program Initiatives
  - 1. Research and Demonstration Projects
  - 2. Career Development Initiatives
  - 3. Handouts

III. Internet Overview
- A. Bulletin Board Systems (BBS)
- B. Commercial Information Systems
- C. Local Area Networks and Wide Area Networks
- D. Internet

IV. Careers On-Line
- A. Accessing Careers On-Line
- B. Databases
  - 1. Job and Internship Postings
  - 2. Resume Information
  - 3. Job Accommodation Information
  - 4. Adaptive Technology Products & Resources
- C. Usage Statistics
- D. Exercise

V. World Wide Web
- A. Surfing the Web with Hypertext
- B. Making Bookmarks
- C. Using Internet Search Tools
- D. Finding an Address

VI. Free Surf
- A. Question & Answer
- B. Individualized Assistance

Minnesota Rehabilitation Counseling Association

Fall Conference
November 7, 1996

Surf Your Way To A Job:
Using the World Wide Web in Your Job Search

Donna Johnson
Project Coordinator
Disability Services
University of Minnesota
12 Johnston Hall
101 Pleasant Street SE
Minneapolis, MN 55455
(612) 626-8035

Curt Griesel
Analyst/Programmer
Academic and Distributed
Computing Services
University of Minnesota
11 Appleby Hall
128 Pleasant Street, SE
Minneapolis, MN 55455
(612) 626-0365

AGENDA

I. Introduction
II. Rationale for using "the Web" in Job Search
III. Careers On-Line demonstration
IV. Hot Picks
V. Wrap Up

APPENDIX F

JOB POSTING AGREEMENT

University of Minnesota

Careers On-Line Job Posting Agreement

Name:_____ Position Title:_____
Organization/Company:_____
Street Address:_____
City:_____ State:_____ Zip:_____
Phone:_____ Fax:_____
E-mail address:_____

I would like to send the Careers On-Line project job postings in the following categories:

___ Full-time job ___ Internship
___ Part-time job ___ Co-op

I understand that job postings sent to Careers On-Line will be handled as follows:

Job postings will be put on Internet and will therefore be available to University students and graduates with disabilities and to anyone else (locally or nationally) who has access to Internet Gopher and/or World Wide Web.

Signature_____ Date_____

Please complete this form and return it with any job postings you would like to send to:

Donna Johnson, Project Coordinator
Careers On-Line, Disability Services
University of Minnesota
12 Johnston Hall
101 Pleasant St. S.E.
Minneapolis, MN 55455
Phone (V/TTY): (612) 626-8035
Fax: (612) 626-9654
E-mail: careers@disserv.stu.umn.edu

We invite you to continue sending job postings on a regular basis.

APPENDIX G

MEDIA COVERAGE OF COL

CYBERSPACE

HOT LIST

What's new, what's cool in area Web sites

Top-flight Web design

1 To see Minnesota Web design at its very best, examine the five Minnesota College of Art Design student pages that recently received a joint "High Five Excellence in Site Design" award. They include Michael Craig's "The End of the World: An Advent Calendar" and Bill Rude's "Atomic Rocket."

http://www.highfive.com/past/high_five_12.27.95.html

Trout Page

2 Interested in trout fishing? Join Kiap-TU-Wish, a local chapter of Trout Unlimited with members in the Twin Cities and Wisconsin. Browse the chapter's page for stream conditions and pictures of great-looking fish — plus links to the Wisconsin Fly Fishing Page and other sites of interest to anglers.

http://www.spacestar.com/users/lambcom/kiap.html

Loon County

3 Come on down to the Virtual Barn Dance. This visually appealing page publicizes Loon County, an old-time string band specializing in the country music that was common in rural America before the advent of mass media (such as the Net). Click on the WAV links for audio samples.

http://mixer.visi.com/~tcarlson/

Open Prairie Comic Syndicate

4 Now you can check out the popular "Dykes to Watch Out For," a lesbian-oriented comic strip by cartoonist Alison Bechdel (who is a former Twin Citian). The Open Prairie page also features the work of artists David Kelly, Joe Hoover, Robert Kirby, Chris Monroe and Richard MacPhie.

http://www.winternet.com/~oprairie/

Ski touring club

5 The North Star Ski Touring Club is a Minnesota-based group that helps people ski well (and have fun, of course). This page is loaded with information about cross-country skiing as well as hiking, biking, canoeing, kayaking and other outdoor pastimes.

http://pressenter.com/~nsstc/

Video game tips

6 Gaming tips? We'll give you gaming tips. This page contains tricks and cheats for almost every game imaginable, including those for the Saturn, PlayStation, Super NES and Virtual Boy platforms.

http://www.winternet.com/~markhj01/videogametips/

Acoustic Music News

7 For listings of local music happenings, try browsing the Acoustic Music News. "In the last few years," says editor Wendy Vickers, "we've seen an increase in coffeehouses and clubs willing to give exposure to newer acoustic artists. Radio and media have also have taken closer note of late."

http://scream.iw.net/~themusic/city/tcmn/tcmn.html

Careers On-Line

8 No barriers. That's the philosophy behind the Careers On-Line page, sponsored by the University of Minnesota's Disability Services, which uses the World Wide Web to provide job-search and employment information for people with disabilities.

http://www.disserv.stu.umn.edu/COL/

Crooked Creek Observer

9 From up in the north woods comes the Crooked Creek Observer, with stories and articles on travel, wildlife, the environment and society. "Well, up here at the Creek it's been quite a winter ... the worst, they say, in a century," it begins. "We don't know about that, but we do know that when it's 42 below, peanut butter freezes in one minute ... and the dogs take a pee in an awfully big hurry."

http://www.emily.net/~schiller/ccobserv.html

Holdingford High School art

10 Wanna see some really cool murals? Click over to the Holdingford High School art department page, which gives you a virtual tour of the artwork in the library, cafeteria, hallways and classrooms. There are other works by students and a teacher, plus a swell animation of a spinning globe.

http://uslink.net/~modrawer/HSart/

Compiled by Julio Ojeda-Zapata. To nominate a site for the Hot List, e-mail ojeda@pioneerpress.com

A clickable, hotlinked version of the Hot List plus archives of past sites are available on PioneerPlanet, the Pioneer Press' online service (**http://www.pioneerplanet.com**). Look for the PioneerPlanet HotSite logo on notable area Web sites.

BEST COPY AVAILABLE

WEEKLY HOTLIST

What's New and Cool in Area Web Sites
Click here for the HOTLIST ARCHIVES

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Compiled by Staff Writer Julio Ojeda-Zapata

To Nominate a Local Site for The Hot List, Send Your Suggestions to ojeda@pioneerpress.com

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Internet job searches popular, but are they effective?

The Internet has drawn companies looking for new hires and applicants looking for work. But so far there's no guide for making connections in the vast cyberspace pool of job information. Give it five years, some say.

By Steve Alexander
Star Tribune Staff Writer

Searching for a job on the Internet has become increasingly popular as growth of the worldwide network continues, but questions remain about whether it's effective for most people.

To a large extent, job seekers need to be Internet-savvy, in the right profession and lucky in order to get hired through the Net.

Thousands of job seekers who understand how to navigate the Internet's World Wide Web are answering want ads or posting their résumés at Web home pages such as America's Job Bank, Career Mosaic, the Monster Board, Online Career Center, E-Span and Med Search.

In addition to jobs and résumés being posted on Web pages, they are also found in Internet news groups such as misc.jobs.offered, which is said to list more than 8,000 new jobs each week.

Job listings and résumés on the Internet tend to be for people in computer-related professions and a few other fields such as sales, medicine, finance, law and human resources.

But the much-vaunted explosion in use of the Internet has turned out to be a barrier when it comes to searching for a job. So huge is the Internet's library of employment information that job applicants and employers may never connect.

Turn to **JOB SEARCH** *on* **A5**
Also on **A5:**
— A list of selected employment services that can be contacted on the Internet.

Monday
NOVEMBER 6, 1995

Star Tribune

Minneapolis Edition

NEWSPAPER OF THE TWIN CITIES

An informal survey of a group of Minnesota job applicants who have posted their résumés on the World Wide Web in recent months revealed that none had found jobs that way.

And one local software executive who was hired from Denver through the Internet earlier this year said he believes that he's the exception rather than the rule.

"There's no uniform point of entry for doing a job search on the entire World Wide Web, and that makes it extremely difficult for a person who is not a Net surfer to find what he or she is looking for," said Edward Boddie, assistant director of base technology at Prairie Development Inc., a Bloomington software firm.

But a steady trickle of jobs is being found through the Internet, and some believe that that could grow into a flood over the next five years. And while many corporations are still trying to decide whether to use the Internet for recruiting, some have found that using the Web is a worthwhile and relatively inexpensive method of hiring people.

At Minneapolis-based Honeywell, the home and building control business has made 10 of its 800 hires this year from the Internet, mostly engineers and sales people. Dave Brookman, manager of employment services and administration for the business unit, said he has found Web recruiting to be unexpectedly useful. While it was anticipated that the Internet would produce many candidates for engineering jobs, Brookman was "surprised and pleased with the candidates we've gotten here for nontechnical sales positions; I wouldn't have expected that."

One of the people Honeywell hired is Reginald Mitchell Sr. of Minneapolis, an MBA graduate and law school student at the University of Minnesota. As part of a university telecommunications class, he created his own Internet Web page. (A Web page, or home page, is a specific address on the Internet's World Wide Web that can contain text or graphics.) And, in hope of getting attention for the page, he arranged for an electronic link from the home page of his fraternity, Alpha Phi Alpha, which in turn was linked to a home page for the National Society of Black Engineers.

Honeywell hired Mitchell in June as a student aide in the information-systems portion of home and building control to help develop Internet Web pages. Mitchell said getting a job through the Internet was "a one-in-a-million shot" that paid off.

While Internet hiring is new at Honeywell, Brookman said he expects it to become increasingly common. One reason is that Internet advertising is cheap compared with using newspaper ads or professional recruiters.

E-Span Inc., an Indianapolis firm that Honeywell uses to post job listings on the Internet and on online services such as America Online and Compuserve, charges corporations $3,900 for up to 1,200 listings a year, or about $3.25 each for a job listing that runs for a month.

Brookman said Honeywell routinely pays $2,000 to $4,000 for a single display newspaper ad in New York City or Los Angeles. In addition, Honeywell pays professional recruiters 20 to 33 percent of the first-year salary of a new employee, a range of $14,000 to $33,000 for jobs paying $70,000 to $100,000 a year.

"When you hire an average of 1,400 people a year, it's nice to use a cheaper service," Brookman added.

Other Minnesota firms, including Cargill and Land O'Lakes, have begun limited recruiting efforts over the Internet; neither company has made any Net hires so far.

"We have great expectations for the Internet and certainly believe that is where we need to be," said Terri Kemmerer, manager of college programs in Cargill's human resources department. "We advertise quite heavily in the newspaper, and I think that more and more we are going to see this occurring via the Internet."

Land O'Lakes is using the Internet only to accept résumés from people with disabilities through the University of Minnesota's Internet job service for people with disabilities, called Careers On-Line.

One of the most ardent believers in Internet job searching and recruiting is Joyce Lain Kennedy, a San Diego jobs columnist and the author of the books "Hook Up, Get Hired!" and "The Electronic Job Search Revolution." People who can't find jobs through the Internet usually aren't going about it correctly or aren't very employable, she said.

One of the keys to an Internet job search is to write your résumé using key words that will generate a "hit" when your résumé is scanned by the computer of a potential employer. Kennedy also recommends using the Internet home pages of corporations to do research on a potential employer before going to a job interview. But even if you do everything right, you won't find a job on the Internet if your job category isn't in demand.

"The Internet is not a magic bullet, it just extends your range. If you are unemployable in the traditional job market, you will not become magically employable in the cyber job market," Kennedy said.

Despite the growing popularity of Internet job searching, some college career counselors and job applicants remain skeptical.

"I think the Internet is kind of a long shot at this point," said Jan Windmeier, director of career services for the University of Minnesota's Carlson School of Management. Many companies "are just getting so many contacts about jobs . . . that they are reluctant to get hundreds or thousands of contacts over the Internet."

Minnesota job-seekers using the Internet described fruitless searches.

Shawn McCabe, of Coon Rapids, said he has been looking for a sales engineer job through the Internet since July and hasn't received a single response. "All I've gotten are a lot of people selling stuff," he said.

Mark Miller, a retired Navy aircraft-electronics technician, began looking for a job on the Internet after he recently graduated from technical school in geographic information systems, a means of relating maps to databases of information. He had one response to posting his résumé on the Internet in September but didn't want to move to Texas.

Miller accesses the Internet through America Online, and thus pays for the number of hours he uses the Internet. "I'm going to hate to see my phone bill from America Online, but if it lands me that perfect job it will be worth it."

Steven Gilkey of Plymouth found a sales job in Clearwater, Fla., through traditional newspaper want ads. But, he said, he was able to use the Internet to learn about his new employer before taking the job.

For at least four companies where he interviewed, he "had pages and pages of information from the Internet available to me prior to going into the interview," Gilkey said.

He's philosophical about his lack of success in using the Internet to find a job. "While I think the Internet is the most efficient way to place employees with employers, only a very small percentage of employers in nontechnical arenas are taking advantage of it."

Despite the disappointments, there is a widespread feeling that Internet job searching is only in its infancy and will become important in years to come.

"A large percentage of Internet users, maybe 80 to 90 percent, are upper-middle-class white males in technically oriented professions, and that is reflected in the types of résumés that you see posted," said Jack A. Pejsa, who runs an Internet consulting business out of his home in Roseville. "But I certainly think that will change as more and more people get on the Net."

Selected employment services on the Internet

- **Career Magazine**
  http://www.careermag.com/careermag/
- **Career Mosaic**
  http://www.careermosaic.com
- **Career Web**
  http://www.cweb.com
- **Careers On-line**
  http://www.disserv.stu.umn.edu/TC/Grants/COL/
- **E-Span**
  http://www.espan.com
- **Job Bank**
  http://www.ajb.dni.us
- **Job Trak**
  http://www.jobtrak.com
- **Job Web**
  http://www.jobweb.org
- **Med Search**
  http://www.medsearch.com
- **The Monster Board**
  http://www.monster.com
- **Online Career Center**
  http://www.occ.com/occ/

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"Careers On-Line:" Employment, Disability, And Technology

by Rick Battaglia

One of the toughest challenges in any job search is getting the opportunities to interview. With an exorbitant 70% unemployment rate for people with disabilities, obtaining those all important interviews can be particularly difficult.

One initiative that addresses this unemployment issue is Careers On-Line. Careers On-Line is a U.S. Department of Education, OSERS (Office of Special Education and Rehabilitative Services), funded project of the University of Minnesota Disability Services, in cooperation with Distributed Computing Services. Careers On-Line establishes an electronic database accessed via Internet by employers, job seekers, and career development professionals. This network linkage should help facilitate the employment process for all three parties.

How does Careers On-Line work? Job seekers access an electronic database network via Internet Gopher to review job, internship, and coop openings (full-time and part-time) of employers representing a wide range of career options. Most job postings are for the Twin Cities area but other employment databases from outside Minnesota are also included in Careers On-Line. Employers will have the opportunity to review resume data of students and graduates with disabilities. Both students and employers access an adaptive technology product database that provides a comprehensive listing of products and manufacturers. This adaptive technology resource empowers people with disabilities to more effectively access information in various modes such as computers, telecommunications, and electronic communications. A fourth database will be added later that contains job accommodation information. In addition, Careers On-Line provides electronic access to career development resources from another Disability Services project called Career Connections. This database features information about services for students with disabilities such as career assessment and planning, internships, mentoring, job search strategies, and job shadowing.

The information server is a Macintosh workstation at the University of Minnesota. Students and professionals who have access to Internet will be able to access the server via Gopher client software. Anyone without access to Internet may gain the same information by joining one of the participating computer networks, either locally or nationally. Project staff are training students with disabilities and members of participating organizations and businesses in use of the network. Students with disabilities who are proficient in using the network and adaptive technology assist in training others.

With the advent of the Americans with Disabilities Act (ADA), employers are becoming more aware of the need to hire people with disabilities as an integral part of their workforce diversity initiatives. Careers On-Line provides students/ graduates with disabilities and employers an opportunity to work together to achieve their objectives.

For more information about Careers On-Line, please contact Rick Battaglia, Project Coordinator, University of Minnesota, 12 Johnston Hall, 101 Pleasant St. SE, Minneapolis, MN 55455, (612) 626-9649 (voice/TTY), (612) 626-9654 (fax), rick_battagli@dsmail.stu.umn.edu (e-mail).

Rick Battaglia is with the MN Association on Higher Education and Disability.

APPENDIX H

JOURNAL ARTICLES

JOURNAL ARTICLES PUBLISHED OR IN PROGRESS

Aune, B. (1996). Careers On-Line: A competitive edge for students with disabilities. The Journal for Vocational Special Needs Education, 18(2), 77-78.

Stockdill, S., Lomas, D., Aune, B., & Johnson, D. (1997). The next evaluation frontier: The internet. Draft completed. To be submitted for publication. Contact project office for more information (612-626-9658).

APPENDIX I

CAREERS ON-LINE PUBLICATIONS

- Description of Materials Available and Order Form
- Job Search Manual Cover and Table of Contents
- 1994 Bibliographies Cover and Table of Contents
- 1996 Bibliographies Cover and Table of Contents
- User Guides (World Wide Web and Gopher versions)
- Career Connections Newsletters

Materials Available From Research & Training, Disability Services, University of Minnesota

* **Annotated bibliographies** - Resources on disability, career development, and employment. Beginning with the 1994 edition, the topic of technology as it relates to employment was added. Each year's edition has all new abstracts.

Career Connections Final Report - Discusses the findings of Career Connections project which promoted career development of college students with disabilities through direct service to students and training to campus professionals and community employers.

Career Connections Student Programs Packet - Describes Career Connections' student services.

* **Careers On-Line Final Report** - Discusses the findings of Careers On-Line project, which developed six databases on the World Wide Web: job and internship postings, job accommodation information, adaptive technology projects, resume information, mentoring information, and career resources.

Igniting the Power in Disability: A Leadership Curriculum - This manual includes the materials developed and the resources used for the 1994 and 1995 Institutes on Disability and Leadership. Information from sessions held at the Institute and a general bibliography are included. The manual is designed for use in training and development programs at your institution.

Job Accommodation Handbook - Offers information on accommodating workers with disabilities. Included in this database are scenarios of how individuals have accommodated their disabilities in the workplace and how employers have provided accommodations. The database also offers referrals to other sources of accommodation information. A brief summary of the American with Disabilities Act is also available in this database.

* **Job Search Techniques for College Students and Alumni with Disabilities** - A training manual which includes presentation notes, simulated interviews based on specific disabilities, and visuals for use when training college students and alumni with disabilities.

Project LEEDS Final Report - Discusses the findings of Project LEEDS (Leadership Education to Empower Disabled Students) which promoted leadership development of college students with disabilities through national institutes and regional conferences on disability and leadership.

Putting Ability to Work: Disability, Career Development, and Employment - Training manual which can be used to train campus professionals, community employers, and human resource professionals. One section is designed to train students with disabilities on how to co-facilitate workshops. Topics in the manual include: 1) interactional model of disability; 2) ADA and Section 504; 3) overview of major disability types; 4) enhancing communication with people with disabilities; 5) reasonable accommodations in the workplace; 6) counseling students with disabilities; 7) hiring and supervising; and 8) becoming a student trainer. This manual includes lectures with overheads and handouts, small group activities, role plays, simulations, demonstrations, and suggestions for videos.

The Mentoring Experience - Training manual provides instructions to coordinate a mentoring program, including how to recruit mentors and students. Mentors for this program are working professionals in the community. The manual also includes a student orientation workshop and a training for mentors and students.

* **User Guide: Accessing Careers On-Line through World Wide Web or Gopher** - A step-by-step Macintosh manual to help you access the databases. The guide is complete with graphic illustrations, especially helpful for the novice Internet user.

* Developed by Careers On-Line

Order Form

If you are interested in obtaining any of our materials, please complete this form. Checks or purchase orders payable to Disability Services, University of Minnesota. See newsletter and the back of this form for further description of these items or contact the project office.

Name: _____
Address: _____
_____
Phone number: _____
E-Mail address: _____
Fax: _____

____ Please add me to your Engage newsletter mailing list (no charge)
____ Project LEEDS Final Report: Leadership Education to Empower Disabled Students [$21.50]
Career Connections Final Report. Also available through ERIC (ED 390 206)
____ Unbound 3 hole punched [$19.50]
____ Bound [$21.50]
User Guide: Accessing Careers On-Line Services through Internet
____ World Wide Web Macintosh [$4.00]
____ Gopher Version - Macintosh [$4.00]
____ Igniting the Power in Disability: A Leadership Curriculum [$25.50]
____ Training Manual: Job Search Techniques for People with Disabilities [$10.50]
* ____ Job Accommodation Handbook [$5.00]
____ Training Manual: Putting Ability to Work: Disability, Career Development and Employment [$25.50] Also available through ERIC (ED390207)
____ Training Manual: The Mentoring Experience [$5.00]
____ Career Connections Student Programs Packet [$4.00]
Annotated Bibliographies:
____ 1992 edition [$4.00] Also available through ERIC (ED350741)
____ 1993 edition [$5.00] Also available through ERIC (ED368117)
____ 1994 edition [$5.00] Also available through ERIC (ED377663)
____ 1996 edition [$5.00]
____ *(NEW)* Careers On-Line Final Report [$21.50]

Mail/Fax your order with check or purchase order to (checks preferred):

Research & Training
Disability Services, Univ. of Minnesota
12 Johnston Hall, 101 Pleasant St. S.E.
Minneapolis, MN 55455
Fax: (612) 626-9654
Federal ID #41-6007513

Note: If you use a purchase order, be sure to make very clear to whom the material is to be sent.

**These materials are also available on-line. Select Careers On-Line at gopher.disserv.stu.umn.edu or World Wide Web at http://www.disserv.stu.umn.edu/TC/Grants/Col/*

Note: These materials are available in alternative media. To request Braille, large print, disk, or tape, contact the project office (612) 626-9658 (V); (612) 626-9649 (TTY); or e-mail: careers@disserv.stu.umn.edu

JOB SEARCH TECHNIQUES FOR COLLEGE STUDENTS AND ALUMNI WITH DISABILITIES

Text: Donna Johnson
Production and Design: Melissa Molitor

Career Connections/Careers On-Line
Disability Services

UNIVERSITY OF MINNESOTA

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Acknowledgments

We would like to acknowledge the following individuals for their contribution to this project: Susan Aase, Betty Aune, Barbara Robertson, and John Weir.

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This material is available in alternative formats. To request an alternative format, or for further information about the manual, contact:

Betty Aune, Project Director
Disability Services
12 Johnson Hall
101 Pleasant Street S.E.
Minneapolis, MN 55455

This paper was supported by a grant to the University of Minnesota from the U.S. Department of Education, Office of Special Education and Rehabilitative Services. Project # H078C30029. Opinions expressed are the author's and do not necessarily represent the position of the funding agency or the host institution.

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UNIVERSITY OF MINNESOTA

CAREER DEVELOPMENT, EMPLOYMENT, AND TECHNOLOGY FOR COLLEGE STUDENTS AND GRADUATES WITH DISABILITIES: AN ANNOTATED BIBLIOGRAPHY 1996 EDITION

DEVORA LOMAS, EDITOR
TIM FITZGERALD, CURT GRIESEL, AND DONNA JOHNSON, CONTRIBUTORS

CAREERS ON-LINE
DISABILITY SERVICES
UNIVERSITY OF MINNESOTA
MINNEAPOLIS, MINNESOTA

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For further information or to order additional copies:
Betty Aune, Ed.D., Project Director
Careers On-Line
Disability Services
University of Minnesota
12 Johnston Hall
101 Pleasant St. SE
Minneapolis, MN 55455
612-624-6884

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CAREER DEVELOPMENT, EMPLOYMENT, AND TECHNOLOGY FOR COLLEGE STUDENTS AND GRADUATES WITH DISABILITIES:

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SUSAN AASE, JOYCE ANIS, RICK BATTAGLIA,
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AND DONNA JOHNSON, CONTRIBUTERS

CAREER CONNECTIONS AND CAREERS ON-LINE
DISABILITY SERVICES
UNIVERSITY OF MINNESOTA
MINNEAPOLIS, MINNESOTA

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Careers On-Line is funded by the U.S. Department of Education, Office of Special Education & Rehabilitative Services (Project #HO78C30029), and the University of Minnesota - Offices of the Vice Presidents for Academic Affairs & Student Affairs, and the Disability Services Office.

This publication is available in alternative formats upon request. Please contact the project office at (612) 626-9658 (voice)/(612) 626-9649 (TTY).

The University of Minnesota is an equal opportunity educator and employer.

Careers On-Line

A brief introduction for Netscape on Macintosh

A Finding and Starting Netscape on your Macintosh

B Pointing Netscape to Careers On-Line Services

C Searching for a Job

careers ON-LINE

Accessing Careers On-Line Services through Internet Gopher

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A brief introduction for
Turbogopher on Macintosh

A Finding and Starting
TurboGopher on your Macintosh

B Pointing TurboGopher to
Careers On-Line Services

C Searching For a Job

D Posting Resume
Information for Others to View

E Searching for Assistive
Technology Product Information

CAREER CONNECTIONS

Disability Services · University of Minnesota · Spring 1994

Careers On-Line: Employment, Disability, and Technology

One of the toughest challenges in any successful job search is getting the opportunity to interview. With an exorbitant 70% unemployment rate for people with disabilities, obtaining those critical interview opportunities can be particularly frustrating.

One initiative that addresses this unemployment issue is Careers On-Line. Careers On-Line, a collaborative project of the University of Minnesota Disability Services and Distributed Computing Services, is funded by the U.S. Department of Education-OSERS and the University of Minnesota. Careers On-Line establishes an electronic database accessed via Internet by employers, University students/graduates with disabilities, and career development professionals. The electronic network includes full-time/part-time job/internship postings and job accommodation/adaptive technology resources. This network linkage should help facilitate the employment process for all three parties.

The project will collect career-related information into a central computer and then make the information directly available to computer users as a "Gopher" server on Internet, a world-wide computer network. In addition to the information on Internet, a resume database will be established. University of Minnesota students with disabilities will submit their resumes and prospective employers will access the database when seeking candidates. Project staff will train participants in the use of Careers On-Line services and refer them to other electronic sources of information.

Students and professionals with access to Internet will be able to access the server via Gopher client software. Anyone without access to Internet may gain the same information by joining one of the participating computer networks, either locally or nationally. Students with disabilities who are proficient in use of the network will be hired to assist in training others.

1994 is the first year for the project. By the end of the final grant year in 1996, at least 150 University of Minnesota students with disabilities are expected to make up a core group of active Careers On-Line users. Additional students from the University and other institutions will be casual users of the network.

Careers On-Line Vision

Careers On-Line envisions a community linked by electronic telecommunication in which students, campus staff, and employers realize the range of career possibilities for people with disabilities, utilize disability resources and adaptive technology, and access on-line services. We envision students gaining a greater sense of control over their futures through the use of technology and we envision employers who — through electronic networks — interview, hire, and advance people with disabilities based on their individual abilities and contributions.

The Benefits of Computerized Communications in the Job Search Process

It is no secret that gathering information is an essential part of the job search process. There is a wealth of information to be sifted through, from job listings to company information to things as mundane as talking to a professional to learn more about the work world.

With the advent of computer communications, it is now possible for such information to be made readily available to persons with disabilities, one of the most highly-trained yet under-employed groups in the country. Computerized communications can assist in the job search process by ensuring that career information is accessible, organized, timely, and conforms to the reader's schedule.

Accessibility
Computerized documents can be readily converted by the reader to the format that is most easily read. In addition to the standard printed page, computer technologies now exist to present documents in large-print, Braille, and even in a spoken voice. Also, a variety of devices exist that allow one to manipulate documents easily with simple keystrokes, and even with spoken commands, making material more manageable for people with motor impairments.

Organization
Information on a computer can be quickly sorted, searched, and reorganized. This makes it possible to peruse larger amounts of information than could be processed in printed form. Also, useful information can be quickly copied and reorganized into personal files for later reference.

Timelines
Not only is access to information important, but the quality and timeliness of information is also critical. Computerized communications allows immediate updating of information, so the reader can gain the latest information and learn of any changes as quickly as possible. This is especially important for finding job openings.

Conforms to Reader's Schedule
Computerized information can be made available on-line twenty-four hours a day. With a personal computer and a modem, a job seeker no longer has to make an appointment or travel to another location to learn the latest job search information. Job seekers can access information when they want it and at a location convenient to them.

Accessibility, organization, timeliness, and flexibility of schedule are among the benefits that computerized communications offer to the job seeker. While relatively small at this time, the amount of job search activity that takes place "on-line" is rapidly growing. As such resources grow, the Careers On-Line project exists to ensure that job seekers with disabilities will be made aware of and ensured access to this exciting new job search tool.

Announcing a New Leadership Project

Disability Services at the University of Minnesota has received a grant from the Dwight D. Eisenhower Leadership Development Program, U.S. Department of Education to develop Project LEEDS (Leadership Education to Empower Disabled Students). This project will provide national training to develop the leadership and self-determination skills of students with disabilities.

Project LEEDS will offer six-day intensive workshops in the summers of 1994 and 1995 for students with disabilities and student affairs professionals from colleges and universities nationwide. Twenty-five institutions will be selected over the two years to receive partial funding for attending the workshop. In addition, regional networks and an Internet bulletin board will be created to establish and maintain nationwide communication among participants of the project.

For more information or for an application to participate, contact Project LEEDS, 340 Coffman Memorial Union, 300 Washington Ave SE, Minneapolis, MN 55455 (voice/TTY 612-626-0961) e-mail (leeds@disserv.stu.umn.edu).

CC After the Grant Period

Although the OSER's-sponsored Career Connections grant will be coming to a close on August 15, 1994, the Career Connections program will still be going strong. University of Minnesota Disability Services institutionalized the Career Connections program one year early — and now it's officially part of services provided through Disability Services.

We will now serve students on an on-going basis in which intake interviews will be conducted to determine appropriateness of services. Students who access services from Career Connections may choose career planning and assessment, mentoring, and internship/job search assistance as ways to enhance their career development. These services were rated highly by students and were deemed successful by project staff. Students will no longer be required to take an initial assessment upon entrance to the program nor will they complete a program plan. These two aspects to the Career Connections program were not found to be as helpful as the other services, based on surveys and interviews of students.

The training and consultation services will also be continued through the newly formed outreach unit of Disability Services. This unit will provide workshops, on-site consultations, and technical assistance for University of Minnesota faculty and staff, local employers and community agencies.

Materials Available from Career Connections

The training manual that was field-tested last year has been revised and expanded and is now ready. Its new title is Putting Ability to Work: Disability, Career Development and Employment.

This manual can be used to train campus professionals, community employers, and human resource professionals. One section is designed to train students with disabilities on how to co-facilitate workshops.

Topics in the manual include: 1) interactional model of disability; 2) ADA and Section 504; 3) overview of major disability types; 4) enhancing communication with people with disabilities; 5) reasonable accommodations in the workplace; 6) counseling students with disabilities; 7) hiring and supervising; and 8) becoming a student trainer.

The manual includes lectures with overheads and handouts, small group activities, role plays, simulations, demonstrations, and suggestions for videos.

The field-test version of the manual also included a section on training mentors (professionals in the community) and mentees (students with disabilities). Mentorship training will now be a separate manual (The Mentoring Experience) and will be available spring of '94.

Other materials developed by Career Connections include 1) annotated bibliographies on career development, employment, and disability (in collaboration with the University of Massachusetts); 2) working papers on career development and employment issues; 3) "Student Programs Packet" (describing Career Connections student services); and 4) annual newsletter (jointly with Careers On-Line). To receive any of these items, please fill out the order form included in this newsletter. Note that the 1992 annotated bibliography is also available through ERIC (ED350741).

Career Connections Vision

Career Connections envisions students who are proactive in their career development — accessing mainstream career services, understanding their rights and responsibilities under ADA, and obtaining satisfying jobs that match their strengths. We envision campus career development counselors who are aware of the wide range of career possibilities for students with disabilities and who provide accessible and appropriate services. Finally, we envision local employers who have explicit knowledge on how to carry out the ADA and who actively seek to hire and advance people with disabilities.

Career Connections Presents at Nine Professional Conferences in '93-94

- *Project Directors Meeting, OSERS, U.S. Dept. of Ed. (poster session '93, presentation '94) —Washington DC*
- *Association on Higher Education and Disability (AHEAD) —Baltimore*
- *Work Now and in the Future (with U of Wisconsin at Madison — Portland*
- *National Career Development Association (NCDA)—Albuquerque*
- *Two-day workshops (with U of Wisconsin at Madison) — Kansas City and Cambridge*
- *American College Personnel Association (ACPA) — Minneapolis*
- *Minnesota Career Development Association (MCDA) —Minneapolis*
- *American Counseling Association (ACA) — Minneapolis*
- *National Association of Student Personnel Administrators (NASPA) — Dallas*

Project Staff Available for Consultation

Project staff are available to provide consultation via phone, e-mail or on-site. Staff specialize in issues related to career development, employment, and technology. Consultation can be provided to an individual or a group. For instance, a department might invite a project staff member to attend one of your staff meetings or to meet with one or more members of your staff. To request a consultation, contact Rick Battaglia, Project Coordinator (phone: 612-626-9649) (e-mail: careers@disserv.stu.umn.edu).

Career Connections and Careers On-Line Staff

Sue Kroeger, Ed.D., Principal Investigator
Betty Aune, Ed.D., Project Director
Rick Battaglia, Project Coordinator
Donna Johnson, Career Experiences Coord.
Curt Griesel, Technology Coordinator
Tim Fitzgerald, Systems Operator
Terry Collins, Ph.D., Dissemination Editor
Ann O'Toole, Administrative Ass't
Joyce Anis, Graduate Teaching Ass't
Beth Gaipa, Graduate Research Ass't
Liz Malherek, Student Secretary
Mary Boeser, Student Data Entry Operator

This newsletter is available in Braille, large print, audio tape, and via e-mail. To request alternative media or to obtain further information about the project, contact the project office at 612-626-9658; e-mail (careers@disserv.tc.umn.edu); fax (612) 626-9654.

Career Connections (Project # HO78C10039) and Careers On-Line (Project #HO78C30029) are funded by the U.S. Department of Education, Office of Special Education and Rehabilitative Services with additional support from the Office of the Vice President for Student Affairs, Office of the Vice President for Academic Affairs, Disability Services, and Distributed Computing Services, University of Minnesota.

Career Connections
Disability Services
12 Johnston Hall
101 Pleasant Street
Minneapolis, MN 55455

Non-profit org.
US Postage
PAID
Minneapolis, MN
Permit No. 155

CAREER CONNECTIONS
Disability Services University of Minnesota 1995

Resources and Referrals Through Careers-On-Line

With Careers On-Line in full operation, many useful career resources are available on-line for job seekers and employers. The electronic material available through the Internet is intended to make job and internship listings more accessible to students and graduates with disabilities and provide them resume and job accommodation information and referrals. Employers also benefit from services provided by Careers On-Line by advertising job and internship listings to qualified candidates, and by accessing information on accommodating workers with disabilities.

The resources available through Careers On-Line include: An **Adaptive Technology Products and Resources** Database which lists over 1000 products that help to make information more accessible to people with disabilities. It covers computer-based and other electronic products. It is not a comprehensive listing, but can assist in discerning the range and types of products that can be used to provide workplace accommodations.

The **Job and Internship Postings** Database includes job and internship listings from many local agencies and companies. Most of the positions are located in Minnesota, but some national postings are listed. Postings are organized by discipline, with categories including Arts, Law, Education, Medicine/Health Care, Social Services, Sales/Marketing, Social Science, Engineering/Science, Office/Clerical, and Recreational/Sports/Fitness. In addition to job listings on Careers On-Line, our system offers connections to other job listing services on the world-wide Internet. These listings are as easy to browse as those on Careers On-Line. National lists include those for jobs in federal agencies, higher education, and general career centers listing varieties of jobs from all over the country and the world.

The **Job Accommodation Handbook** from Career Connections has been put on-line to offer information on accommodating workers with disabilities. Included in this database are scenarios of how individuals have accommodated their disabilities in the workplace, and how employers have provided accommodations. The database also offers referrals to other sources of accommodation information including the Job Accommodation Network. A brief summary of the Americans with Disabilities Act is also available in this database.

The **Resume Information Database** contains resume writing tips, reference to commercial resume services available on the Internet, and general career development information.

A listing of **Career Development Resources at the University of Minnesota** includes information on Career Connections, the University Counseling and Consulting Service, the Career Development Center, and other career development/placement offices on campus.

Anyone with access to the Internet may reach our services at no fee by pointing their Internet Gopher client software to the address **disserv.stu.umn.edu** and choosing the option Careers On-Line. You may also reach us through the World Wide Web at **[http://www.disserv.stu.umn.edu/TC/Grants/COL/]**. Refer technical problems accessing Careers On-Line services to Curt Griesel, Technology Coordinator at (612) 626 - 0365.

Careers On-Line project staff welcomes your comments and suggestions about our services. Please direct feedback and inquiries via e-mail to **(careers@disserv.stu.umn.edu)**.

Sharing Disability Resources on the 'Net

Resources available on the Internet allow professionals and students opportunities to share and access useful information, and to network with others.

Electronic mailing lists are one way that you can utilize the Internet. E-mail lists are ongoing discussions that people subscribe to (at no cost) in order to discuss topics of mutual interest. There are e-mail lists for almost every interest, from environmental activism to David Letterman's Top Ten lists! One list of interest to people who work with students with disabilities in higher education is DSSHE-L (Disabled Student Services in Higher Education-List). On this list, you can share concerns about the provision of services, ask for advice from others, troubleshoot, or celebrate successes. Another list that may be of interest is Able-Job. This list is concerned with job-related access for people with disabilities. EASI (Equal Access to Software and Information) is a list devoted to general information access.

Mailing lists that may be of interest to students with disabilities include CADRE (Coalition Advocating disABILITY Reform in Education), a list for students with disabilities, and NABS-L a mailing list for blind students.

Finally, there are lists that may interest both students and professionals. There are many lists devoted to particular disabilities: Deaf-L, Blind-L, LD-list, MS-list, etc. For people who are interested in cross-disability politics and want to keep their finger on the pulse of the disability rights movement, MOBILITY or ADVOCACY lists are helpful.

Participating in these mailing lists will not only provide you with specific information, but also will acquaint you with a larger community of people who share your interests and concerns. People from all over the U.S., Canada, and the world join these lists.

In addition to the networking available through mailing lists, there is a burgeoning amount of archival information about disability and disability services on Gopher and World Wide Web.

Policies and activities related to disability are posted in a variety of places on Gopher and WWW. If you are already "hooked-up" to the Internet through an account at your institution or organization, take the time to explore the Internet resources available to you. The time you invest will be well worth it! If you aren't hooked up, or don't know if you are, check with personnel at your organization responsible for computing services regarding how you can access the Internet. Happy 'net surfing!

If you have an Internet account and have specific questions about the information in this article, contact Barbara Robertson at (612) 625-0673 barbarar@disserv.stu.umn.edu

Careers On-Line Vision

Careers On-Line envisions a community linked by electronic telecommunication in which students, campus staff, and employers realize the range of career possibilities for people with disabilities, utilize disability resources and adaptive technology, and access on-line services. We envision students gaining a greater sense of control over their futures through the use of technology and we envision employers who — through electronic networks — interview, hire, and advance people with disabilities based on their individual abilities and contributions.

Projects Offer Resource Materials

Career Connections and Careers On-Line have developed a number of resources that are available at cost. Newly developed materials include the "Job Accommodation Handbook," which is described in the feature article in this newsletter; and the "User Guide: Accessing Careers On-Line through Internet Gopher," a step-by-step Macintosh manual to help you access the databases described in this newsletter's feature article. The guide is complete with graphic illustrations, especially helpful for the novice Internet user. Available Fall '95 is a training manual for use with students entitled "Job Search Techniques for People with Disabilities."

Annual annotated bibliographies of resources on disability, career development, and employment are also available. Beginning with the 1994 edition, the topic of technology as it relates to employment was added. Each year's edition has all new abstracts.

The project continues to offer previously announced materials. "Putting Ability to Work: Disability, Career Development, and Employment" can be used to train campus professionals, community employers, and human resource professionals. One section is designed to train students with disabilities to co-facilitate workshops.

Topics in the manual include: 1) interactional model of disability; 2) ADA and Section 504; 3) overview of major disability types; 4) enhancing communication with people with disabilities; 5) reasonable accommodations in the workplace; 6) counseling students with disabilities; 7) hiring and supervising; and 8) becoming a student trainer. This manual includes lectures with overheads and handouts, small group activities, role plays, simulations, demonstrations, and suggestions for videos.

Another training manual, "The Mentoring Experience," provides instructions to coordinate a mentoring program, including how to recruit mentors and students.

Mentors for this program are working professionals in the community. The manual also includes a student orientation workshop and a training for mentors and students. The "Student Programs Packet" describes Career Connections student services. Finally, the "Career Connections" newsletter is disseminated annually.

PROJECT LEEDS (Leadership Education to Empower Disabled Students) is another program offered by Disability Services. By fall of 1995, PROJECT LEEDS will make available the Disability and Leadership Curriculum Manual. This manual will include in curriculum format the materials developed and the resources used for the 1994 and 1995 Institutes on Disability and Leadership. Information from sessions held at the Institute and a general bibliography will be included. The manual will be designed for use in training and development programs at your institution.

To receive any of these items, fill out the order form included in this newsletter. Note that materials are also available through ERIC or on-line as indicated on the order form.

Career Connections Vision

Career Connections envisions students who are proactive in their career development — accessing mainstream career services, understanding their rights and responsibilities under ADA, and obtaining satisfying jobs that match their strengths. We envision campus career development counselors who are aware of the wide range of career possibilities for students with disabilities and who provide accessible and appropriate services. Finally, we envision local employers who have explicit knowledge on how to carry out the ADA and who actively seek to hire and advance people with disabilities.

Career Connections/Careers On-Line Presents at 17 Professional Conferences in '94-'95

- *Society for Disability Studies* – Rockville, MD
- *Association on Higher Education and Disability (AHEAD)*– Columbus, OH; San Jose, CA
- *National Closing the Gap* – Minneapolis, MN
- *American College Personnel Association (ACPA)* –Boston, MA
- *National Association for Job Search Training (NAJST)* –Atlanta, GA
- *Minnesota Career Development Association(MCDA)* – Maple Grove, MN
- *College Placement Council (CPC)* – Orlando, FL
- *Project Directors Meetings US Dept. of Education* – Washington DC; Philadelphia, PA; San Francisco, CA
- *National Career Development Association (NCDA)* – San Francisco, CA
- *New York University Systems Conference* – Albany, Syracuse, Brooklyn, NY
- *Building Bridges: Systems Change through Assistive Technology* – Sioux City, IA
- *American Counseling Association* – Denver, CO

Project Staff Available for Consultation

Project staff are available to provide consultation via phone, e-mail or on-site. Staff specialize in issues related to career development, employment, and technology. Consultation can be provided to an individual or a group. For instance a department might invite a project staff member to attend one of your staff meetings or to meet with one or more members of your staff. To request a consultation, contact John Weir, Project Coordinator (V/TTY: 612-626-9649) (e-mail: careers@disserv.stu.umn.edu).

Career Connections and Careers On-Line Staff

Sue Kroeger, Ed.D., Principal Investigator
Betty Aune, Ed.D., Project Director
John Weir, Project Coordinator
Donna Johnson, Career Services Coordinator
Curt Griesel, Technology Coordinator
Tim Fitzgerald, Systems Operator
Terry Collins, Ph.D., Dissemination Editor
Tina Lorsung, Administrative Assistant
Devora Lomas, Graduate Research Assistant
Liz Malherek, Student Secretary/Editor
Katy Burns, Student Data Entry Operator

Career Connections (project #H078C10039) and Careers On-Line (Project #H078C30029) are funded by the U.S. Department of Education, Office of Special Education and Rehabilitative Services with additional support from the Office of the Vice President for Student Affairs, Office of the Vice President for Academic Affairs, Disability Services, and Distributed Computing Services, University of Minnesota.

This newsletter is available in Braille, large print, audio tape, and via e-mail. To request alternative media or to obtain further information about the project, contact the project office at (612) 626-9658 (V); (612) 626-9649 (TTY); (612) 626-9654 (Fax); or e-mail: careers@disserv.stu.umn.edu

Career Connections
Disability Services
12 Johnston Hall
101 Pleasant Street
Minneapolis, MN 55455

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CAREER CONNECTIONS

Disability Services University of Minnesota 1996

Careers On-Line Provides State-of-the-Art Job Search Tool for Students with Disabilities

Careers On-Line continues to evolve as a state of the art career development resource. For example, in its first year, Careers On-Line utilized Gopher as a mechanism for conveying information. In evaluating the use of Gopher, project staff found it to be less user friendly and graphically attractive than the World Wide Web. In year two, Careers On-Line also found a home on the World Wide Web. In that time, the number of users has quadrupled.

Careers On-Line also has taken advantage of the graphical nature of the World Wide Web. The menus, which were once long lists of straight text, are now arranged specially on the screen in the form of "buttons" that can be selected. This creates a visually attractive system which is easier to navigate.

As well as creating additional graphics, Careers On-Line has further refined its job posting data base. Project staff have recently implemented two catalogs of job and internship listings, one organized by Discipline, the other organized by Region. In the Disciplines listing, we currently have listings for 15 different disciplines, ranging from Agriculture to Zoology. Each list contains links to sites around the world that specialize in job openings for that specific discipline.

Careers On-Line reports more than 23,000 host connections during Fall Quarter 1995.

In our Regional listings, we currently list job sites for twenty-one states and four international regions. On each of these lists, a job seeker will find job lists that specialize in the specific region in which they are searching. Of course, the most popular region to browse for University of Minnesota students has been the Minnesota region, which currently lists 20 different web sites that post Minnesota area jobs.

Careers On-Line has also developed a comments page which allows users to provide feedback and suggestions for ways to improve the service.

In addition to making Careers On-Line more accessible, the Internet also makes it more interactive. For example, any Careers On-Line user has the ability to add job listings to our Regional and Discipline catalogs; the ability to contribute comments to our on-going comments page; and coming soon, the enhanced ability to contribute assistive technology product information to our large product database. Such interactive features allow Careers On-Line to be a vehicle for knowledge sharing as well as information retrieval.

New Resource Materials Available

Leadership Curriculum

Project LEEDS has developed an exciting new leadership training curriculum specifically created by and for disabled students. "Igniting the Power in Disability" is designed to prepare young adults with disabilities to function effectively in leadership roles. Building on materials developed for the National Institute on Disability and Leadership (August, 1994 and June, 1995), the curriculum emphasizes an experiential, interactive approach to learning and provides a framework for students to develop action plans on how to address disability issues on their own campuses.

The curriculum focuses on leadership issues faced by disabled students, and is divided into the following modules: a) identity formation and disability pride, b) disability history/culture, c) leadership theory, d) the dynamics of organizational change, e) navigating the spaces of power, f) exploring the synergy of alliance, g) tools for community building, h) introduction to the Internet, i) moving toward campus action.

Job Search Techniques Training Manual

The training manual, "Job Search Techniques for College Students and Alumni with Disabilities," includes presentation notes, simulated interviews based on specific disabilities, and visuals for use when training college students and alumni with disabilities.

Content covered in the manual includes disability disclosure options, strategies for use when disclosing in an interview, and ways to market skills as well as the disability. The manual also addresses use of the Internet as a job search tool for people with disabilities, describing how to effectively explore web sites and utilize technology in job seeking and keeping.

"Job Search Techniques for College Students and Alumni with Disabilities" is similar in format to Career Connections' "Putting Ability to Work: Disability, Career Development and Employment" and "The Mentoring Experience", and serves as the third manual in that series.

User Guide: Accessing Careers On-Line through World Wide Web

This step-by-step Macintosh manual to help users access the Web databases is complete with graphic illustrations, especially helpful for the novice Internet user.

Career Connections Final Report

This report discusses the findings of Career Connections - a project which promoted career development of college students with disabilities through direct service to students and training to campus professional and community employers. The report describes project activities and accomplishments, outcomes, perceived value, as well as model-building and replication.

Local Media Explores Careers On-Line

Careers On-Line attracted the attention of a major Minnesota newspaper. The Minneapolis Star Tribune highlighted the Careers On-Line home page and services in a November 6, 1995 article focusing on the effectiveness of using the Internet in job searches.

The cooperative work of Careers On-Line and Distributed Computing Services at the University of Minnesota was also featured on a local TV station. KARE-11 aired a piece which focused on new developments in adaptive computer technology for persons with disabilities. Part of the news segment was filmed at the adaptive technology lab run by Careers On-Line/Distributed Computing Services staff and student lab trainers. The story aired in December.

Hot Internet Resources

If you are a professional who works with people with disabilities, you may find that the Internet has exciting resources for you. If you are just easing your way into cyberspace, the sites listed below are good reasons to get cyber-savvy!

Mailing Lists:

• DSSHE-L (Disabled Student Services in Higher Education listserv). On this list, disabled student service professionals offer each other advice and share resources.
To subscribe, e-mail the following message (leaving the subject line empty) to:
LISTSERV@UBVM.CC.BUFFALO.EDU
with the following message: Subscribe DSSHE-L <yourfirstname> <yourlastname>
Once subscribed to DSSHE-L, you would send any messages that you want to reach the entire list to DSSHE-L@UBVM.CC.BUFFALO.EDU — but only if you want everyone on the list to see it!

• EASI (Equal Access to Software and Information). On this list, people share information about adaptive technology for people with disabilities.
To subscribe, e-mail the following message (leaving the subject line empty) to:
LISTSERV@SJUVM.STJOHNS.EDU
with the following message: Subscribe EASI <yourfirstname> <yourlastname>
As with DSSHE-L, you would just substitute "EASI" for the word "LISTSERV" to send a message to the whole list.

• ADA-LAW (Americans with Disabilities Act Law listserv). On this list, people discuss the implications of the ADA for a variety of situation and settings. There is also more general discussion about disability rights as well.
To subscribe, e-mail the following message (leaving the subject line empty) to:
LISTSERV@VM1.NODAK.EDU
with the following message:
Subscribe ADA-LAW
<yourfirstname>
<yourlastname>
As with the other listservs, you would just substitute "ADA-LAW" for the word "LISTSERV" to send a message to the whole list.

World Wide Web Sites:

- ADA and Disability Information, at http://www.public.iastate.edu/~sbilling/ada.html
- American Council of the Blind, at http://www.acb.org/
- Deaf World Web, at http://deafworldweb.org/
- Disability Resources (Evan Kemp Associates), at http://disability.com/
- Dyslexia: The Gift, at http://www.dyslexia.com/
- Epilepsy Web Page, at http://www.swcp.com/~djf/epilepsy/index.html
- The Hub (Info for People in Wheelchairs), at http://www.inch.com/~dog666/hub/
- Mult. Chem. Sens./Envir. Illness, at http://www.orbital.net/~jmay/locate.html
- National Federation of the Blind, at http://www.nfb.org/

If you are looking for information on a specific disability that you do not see listed here, chances are that the general disability links in most of these sites will contain the information you need.

Happy 'Netting!

Engage Promotes Access to Student Life

Engage: Disability Access to Student Life, a new Disability Services project is in full swing. Funded by FIPSE (the Fund for the Improvement of Postsecondary Education), Engage is designed to improve the campus climate for college students with disabilities by eliminating barriers to full participation in student life. The project, a collaborative effort with the Office of Student Activities, seeks to achieve the full integration of disabled students into campus life at participant institutions by providing training and technical assistance to teams of student leaders (disabled and nondisabled) and student life personnel representing two and four-year public and private institutions in the Midwest.

Participating teams conducted a needs assessment on their home campuses and will attend a spring seminar on how to make their campus activities and organizations more accessible and welcoming to students with disabilities. Technical assistance follow-up workshops to further develop participants skills will be provided through on-site visits, an Internet listserv, and real-time computer conferences.

For more information on the project, contact Gene Chelberg, Project Coordinator, at (V/612) 625-1885 or (chelberg @disserv.stu.umn.edu).

Career Connections/Careers On-Line Staff Presented at the Following Conferences in 1995:

- *Association on Higher Education and Disability* - San Jose, CA
- *NY State Education Department and the City University of New York* - Albany, NY
- *Closing the Gap* - Minneapolis, MN
- *Project Directors Meeting, OSERS, U.S. Dept. of Education* -Washington DC
- *National Association of Job Search Trainers* - Atlanta, GA
- *National Association of Colleges and Employers* - Orlando, FL
- *National Career Development Association* - San Francisco, CA
- *Minnesota Rehabilitation Association* - Austin, MN
- *Learning Disabilities of Minnesota* - St. Paul, MN
- *Division of Career Development and Transition, Council on Exceptional Children* - Raleigh, NC

Project Staff Available for Consultation

Project staff are available to provide consultation via phone, e-mail or on-site. Staff specialize in issues related to career development, employment, and technology. Consultation can be provided to an individual or a group. For instance, a department might invite a project staff member to attend one of your staff meetings or to meet with one or more members of your staff. To request a consultation, contact Donna Johnson, Project Coordinator (phone/V/TTY: 612-626-8035) (e-mail: careers@disserv.stu.umn.edu).

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Barbara Robertson, Grad. Teaching Ass't
Melissa Molitor, Stud. Secretary/Editor
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Careers On-Line (Project #H078C30029) is funded by the U.S. Department of Education, Office of Special Education and Rehabilitative Services with additional support from the Office of Vice President for Student Affairs, Disability Services, and Distributed Computing Services, University of Minnesota.

University of Minnesota
Career Connections
Disability Services
12 Johnston Hall
101 Pleasant Street
Minneapolis, MN 55455

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APPENDIX J

EMPLOYERS POSTING JOBS WITH CAREERS ON-LINE

APPENDIX J
Employers Posting Jobs with Careers On-Line

12th Street SLS	Air Products and Chemicals, Inc.
Alexandria Mental Health Office	Alliance for Technology Access
Ameri-Com Internet Technologies	American School for the Deaf
Amherst H. Wilder Foundation	Amted
Anoka County Court Administration	Anoka County Government
Arc of Anchorage	Anstec, Inc.
Ash Street	Arkansas School for the Deaf
Austine School for the Deaf and Hard of Hearing	Atlantic Provinces Special Ed. Authority (APSEA)
Bancrof SLS	Baltimore County Public Schools
Bloomsburg University	Best Buy Co. Inc.
BOB 100 FM	Board of Education of the City of New York
Brown University	Bush Children's Center
Bush Youth Residences	California Polytechntc State University
California Relay Service	Camden Center
Camden Neighborhood Center	CAP Cities/ABC's 93.7 The EDGE.
Capital City Internship Program	Central North Carolina School for the Deaf
Catholic Charities of the Archdiocese of St. Paul and Minneapolis	Child & Adult Care Food Program
Child Development Center	Child Guidance Clinic, Minnesota
City of Bloomington, Minnesota	City of Minneapolis, Minnesota
City of Robbinsdale	City of Shakopee, Minnesota
St. Paul School District 625	Cleveland Signstage Theatre
Coalition in Oregon for Parent Education	Colfax Communications, Inc./KOOL-108
Columbus Speech and Hearing Center	Commonwealth of Massachusetts
Communication Service for the Deaf	Community Assistance Program
Community Outreach & Social Services	Counseling and Support Services for Women
Courage Center	Conus All News Channel
D.F. Solem & Associates/Media Consultants	Cornell University
Dakota County	County of Anoka
Deaf Services Bureau of Miami	D.E.A.F., Inc.
Delegated Examining Unit for The U.S. Office of Personnel	Deaf Service Center Inc. of Hillsborough County, Florida
Dorothy Day Center Program Supervisor	Dakota County Public Health
East Carolina University	Deaf-Blind Contact Center
Eisenmenger Learning Center	Deafness Education Advocacy Foundation
Ellerbe Becket Company	Disability Action Center - Northwest
Employment Action Center	Edina Community Center
Executive Office of the President U.S. Office of Personnel	Executive Office of the President U.S. Office of Administration
Federal Government	Fingerhut Corporation
Functional Independence Training, Inc. (FIND)	Gallaudet University
Good Age Newspaper-Jenny Mims	Green Acres
Hatlen Foundation - Minnesota Life College	Hawaii Services on Deafness
HBI Corporation	Health Care Center
Hennepin County Medical Center	Hewitt Residential Crisis Program
Hope House	Idaho School for the Deaf and the Blind
Hubbard Broadcasting	International Exchange Programs Intern
Indiana School for the Deaf (ISD)	Juvenile Horizons

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Interstate Resource Center for Independent Living	Kaposia, Inc.
Kalpulli/Turtle Island Multiversity	KCCO-TV
KARE-TV, a Gannett owned NBC affiliate	KCLD Hit Radio.
KCFE-FM/Cafe 105.7.	KEGE
KDLH TV	KMSP-TV
KLGT WB-23	KSAX/KRWF TV
KRBI Radio	KSTP FM
KSTP AM	KSTP TV News
KSTP TV	KTCZ/KTCJ
KTCA/KTCI Twin Cities Public Television	KWLM/Q102 Radio.
KTTC-TV	Lambert Vocational Services
Lake Independence Vinland Center	Learning Disabilities Association
Land O'Lakes, Inc.	Lighthouse for the Blind
Learn PC	Lockheed Martin Federal Systems
Lexington Group Home	Maggi Davern, Volunteer Services Manager
Little People Day Care	Maryland School for the Deaf
Lutheran Social Services of Minnesota	MCI Wisconsin Relay
Mankato State University	Metropolitan Waste Control Commission
Marie H. Katzenbach School for the Deaf	Minnesota Conservation Corps
Mass. Commission for the Deaf and Hard of Hearing	Minnesota Dept. of Trade & Economic Development
McLennan Community College	Minnesota Mutual Life Insurance Company
Michigan Natural Features Inventory	Mississippi School for the Deaf
Minneapolis Rehabilitation Center	Morgan Memorial Goodwill Industries, Inc.
Minnesota Department of Natural Resources	National Technical Institute for the Deaf
Minnesota Historical Society	New Ulm Public Schools
Minnesota State Academy for the Deaf (MSAD)	Nordic Track
Missouri Commission for the Deaf	North Portview
National Conf. for College Women Student Leaders	Norwest Operations Center
Northside Child Development Center	NYS Ofc. of Alcoholism & Substance Abuse Services
Norwest Bank Minnesota, N.A.	Office of Management & Budget Natural Resources
Northwestern Connecticut Community-Technical College	Office of Management & Budget International Affairs Division
Oak Park Neighborhood Center	Office of Information and Regulatory Affairs
Office of Management & Budget Human Resources	Ohio Relay Service
Office of Administration	Orange County High School
Office of Management and Budget	Otselic Valley Central School
Office of the U.S. Trade	People, Inc.
Oppenheimer Wolff & Donnelly	Physical Electronics Inc.
Orleans Central Supervisory Union	Portland House
Palm Beach County Schools	Queens College/CUNY
Pavek Museum of Broadcasting	Ramsey County Human Services
Pillsbury Neighborhood Services, Inc.	Ramsey Medical Center
PrintLink	Recruitment Group
Ramsey Foundation	Resource, Inc.
Reality House, Inc.	Riverside Community College
Registry Systems Corporation	Roof Project
Resource Center on Deafness	San Diego Community College District
Rieke Carroll Muller Associates, Inc.	Scott County, Minnesota
Rochester School for the Deaf	Scranton State School for the Deaf
Saint Croix Girls Camp	Services to Children & Families Administration
San Francisco State University	Sign Language Associates, Inc.

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Scott County, Sheriff's Communications Division	Social Adjustment Program for Southeast Asians
Senior Health Clinic	South Carolina Association of the Deaf
Seton Outreach Services for Women and Families	Spectrum Community Mental Health
Silent News, Inc.	St. Cloud Broadcast Group
Sorenson Broadcasting Corporation	St. Croix Girls Camp
South Carolina School for the Deaf and the Blind	St. Paul - Ramsey Medical Center
SRI International	St. Stephens
St. Croix Boys Camp	STE Purchasing
St. Luke's	Suburban Alliance
St. Paul Public Schools	Sysco, Minnesota
State of Minnesota, Department of Public Safety	Telecommunications for the Deaf, Inc.
STRIDE	The Commonwealth of Massachusetts
Super America	Thomas J. Longmire Personnel Divison
Texas Commission for the Deaf and Hard of Hearing	TSI Incorporated
The Light House	Twin City Area Job Corps
Twin City Area Urban Corps	United States Office of Personnel Management
United Hearing and Deaf Services, Inc.	University of Iowa
Unity Neighborhood Center	University of Minnesota - Employee Assistant Prog.
University of California	University of Nebraska at Omaha
University of Minnesota Sea Grant Institute	University of North Carolina- Chapel Hill
University of New York	University of Washington
University of Vermont	USA Relay/ Texas Relay Center
University of Wisconsin Sea Grant Institute	USSB Consumer Marketing
USA Relay: Minnesota Relay Center	USSB- Information Systems
USSB, Information Services	Vineland National Center
USSB, Telemarketing Operations	Virginia Dept. for the Deaf and Hard of Hearing
Vail Place	Volunteer Services
Virginia School for the Deaf and the Blind	WCCO Radio/Division of CBS, Inc.
Waite House	Wilder Elderly Residences
Wilder Child Development Center	Wilder Forest
Wilder Child Guidance Clinic	Wilder Health Care Center
Wilder Family Works	Wilder Home Services
Wilder Foundation	Wilder Park Association
Wilder Home Health Agency	Wilder Residence East
Wilder In-Home Services	Wilder SE Asian Program
Wilder Research Center	Wilder Square
Wilder Residence West	William Rainey Harper College
Wilder Senior Health Clinic	Wisconsin Telecommunications Relay Service
Wilderness Inquiry	World Institute on Disability
WTBX-FM	Youth Leadership Camp

APPENDIX K

PUBLICITY MATERIALS ABOUT CAREERS ON-LINE ACTIVITIES

- Brochure
- Newsletters

How to Access Careers On-Line Services

ACCESS POINTS:

World Wide Web:
http://www.disserv.stu.umn.edu/TC/Grants/COL/

Gopher:
gopher://gopher.disserv.stu.umn.edu/11/COL/

E-mail:
careers@disserv.stu.umn.edu

GETTING HELP:

Technical problems in accessing Careers On-Line services can be referred to Curt Griesel, Technology Coordinator at *(612) 626-0365* or Tim Fitzgerald, Systems Operator through e-mail *(careers@disserv.stu.umn.edu)*. The Careers On-Line project staff welcomes your specific comments and suggestions about our services. Please direct feedback and inquiries via e-mail *(careers@disserv.stu.umn.edu)* or call *(V/TTY: 612-626-0835)*.

CONSULTATION:

Project staff are available to provide consultation via phone, e-mail or on-site. Staff specialize in issues related to career development, employment, and technology. Consultation can be provided to an individual or group. To request a consultation, contact Donna Johnson, Project Coordinator *(V/TTY: 612-626-8035)* *(e-mail: careers@disserv.stu.umn.edu)*.

Disability Services

For more information about Careers On-Line contact:

CAREERS ON-LINE
University of Minnesota
Disability Services
12 Johnston Hall
101 Pleasant St. S.E.
Minneapolis, MN 55455
(612) 626-8035 (V/TTY)
(612) 626-9654 (Fax)
careers@disserv.stu.umn.edu (E-mail)

Careers On-Line is funded by the University of Minnesota and the Office of Special Education & Rehabilitative Services, U.S. Department of Education (Project #H078C30029).

This publication is available in alternative formats upon request. Please contact Donna Johnson at Disability Services, (612) 626-8035 (V/TTY).

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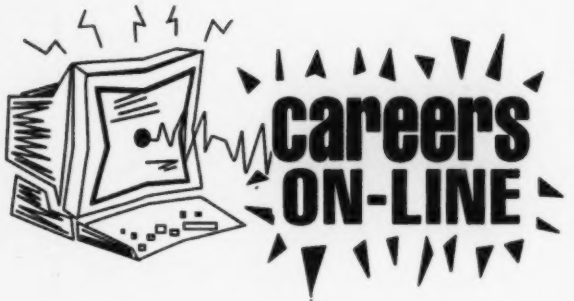

Careers On-Line provides opportunities for students with disabilities, employers, and career development professionals to "put ability to work" through accessible, up-to-date computer networks on the *Internet.*

Disability Services

UNIVERSITY OF MINNESOTA

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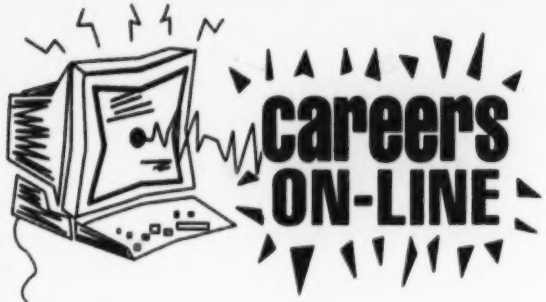


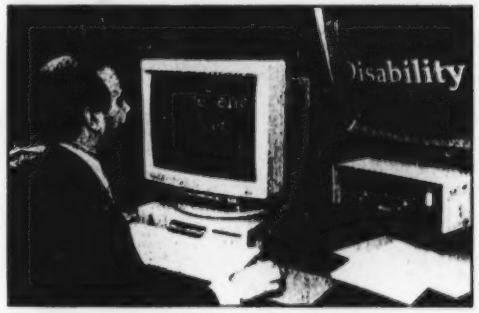
via the...

Putting Ability *to* Work

Disability, Employment *and* Technology

INTERNET → **WORK** ← **TECHNOLOGY**

- Adaptive Technology Products and Resources
- Job and Internship Postings
- Resume Information
- Career Development Resources @ University of Minnesota
- Job Accommodation Information



TARGET AUDIENCE:

College Students with Disabilities

Employers

Career Development Professionals

Students/Graduates have the opportunity to:

- Obtain employment and internship leads from on-line postings
- Learn about workplace accommodations
- Access career development resources
- Find referrals to commercial resume services

Employers have the opportunity to:

- Simplify and focus their recruiting efforts by advertising job postings on-line
- Learn more about the ADA, workplace accommodations and adaptive technology

How To Access Careers On-Line Services

Public Access To Job Postings, Adaptive Technology & Job Accommodation Databases

- Point Internet Gopher software to the following address:

  disserv.stu.umn.edu

Access To Additional Job Postings And Resume Databases

- University of Minnesota students/graduates with disabilities need to contact Disability Services for a referral to Career Connections before resume data can be input and made available to employers:

  30 Nicholson Hall
  626-1333 (V/TTY)

- Employers and career services providers need to contact Careers On-Line before resume data of students with disabilities can be accessed and jobs posted on-line:

  250 Nicholson Hall
  626-9649 (V/TTY)

UNIVERSITY OF MINNESOTA

Disability Services

For more information about Careers On-Line contact:

John P. Weir, Project Coordinator
CAREERS ON-LINE
University of Minnesota
Disability Services
12 Johnston Hall
101 Pleasant St. S.E.
Minneapolis, MN 55455
(612) 626-9649 (V/TTY)
(612) 626-9654 (Fax)
careers@disserv.stu.umn.edu (E-mail)

Careers On-Line is funded by the U.S. Department of Education, OSERS (Office of Special Education & Rehabilitative Services), and the University of Minnesota - Offices of the Vice Presidents for Academic Affairs & Student Affairs, and the Disability Services Office.

This project builds on the work of two existing projects: Career Connections - Disability Services, and the Disability and Computing Development Project - Computer and Information Services.

STUDENT AFFAIRS

This publication is available in alternative formats upon request. Please contact John P. Weir at Disability Services, (612) 626-9649 (V/TTY).

The University of Minnesota is an equal opportunity educator and employer.

careers ON-LINE

Careers On-Line integrates disability issues, employment, and technology. This project provides opportunities for students with disabilities, employers, and career development professionals to "put ability to work."

Careers On-Line is offered by Disability Services in collaboration with Distributed Computing Services.

Careers On-Line

"Putting Ability To Work"

Careers On-Line is a federally-funded project of the University of Minnesota Disability Services. This program establishes an electronic database network accessed via Internet/Gopher linking employers, University students/ graduates with disabilities, and career development professionals.

This electronic network includes the following information:

Job Posting Database

- job, internship, and co-op postings (part and full time)

Resume Database

- resume data sheets of employment candidates with disabilities

Job Accommodation and Product Databases

- job accommodation & adaptive technology resources

What Does Careers On-Line Offer?

University of Minnesota Students/Graduates with disabilities have the opportunity to:

- submit their resume data for review by employers looking for qualified applicants for their job and internship/co-op positions
- obtain employment and internship leads from on-line job postings

Employers have the opportunity to:

- simplify and focus their recruiting efforts by reviewing the resume data of qualified University of Minnesota students/graduates with disabilities for specific job and internship/co-op openings
- supplement their existing recruitment initiatives with state agencies

Career Services Professionals have the opportunity to:

- access current internship, co-op, and job openings
- learn about specific adaptive technology products and resources to facilitate job accommodations

All Individuals have the opportunity to:

- access an extensive database network of job accommodation resources and adaptive technology product listings that will facilitate compliance with the Americans with Disabilities Act (ADA)

DRS Press
Career Connections | Disability Services | February 1996
University of Minnesota

Looking For a Job? Go Surfing!

So you say you're looking for a job and you don't know where to start? How 'bout turning on your computer? (Yes, I said turn on your computer!) If you have a modem or access to the University of Minnesota's computer labs, you have access to Careers On-Line.

Career's On-Line is a federally-funded grant program which makes job and internship postings more accessible through the world-wide computer network--the Internet. To access these extensive job postings, all you have to do is tap into the Careers On-Line job/internship posting data base. This data base contains postings from more than 50 employers which are updated weekly by Careers On-Line project staff.

If you don't find anything that piques your interest in the Careers On-Line job and internship posting data base, you can always explore hundreds of other web sites such as Career Mosaic which focuses on employment in the Fortune 500 companies to Bionet which explores opportunities in the field of biology to Fedworld which concentrates on openings with the federal government.

Once you hook up to one web site, there are literally thousands of links which translate to more job and internship leads. If you want to stay in Minnesota or even the Twin Cities, that's okay, there are links in which you can specify regions or even cities. If you're thinking of moving to Miami, you can find postings for positions there too.

But the information doesn't stop there, Careers On-Line also offers a data base which contains links to resume services on the Internet as well as resume writing tips and general career development information.

If you already have a job or internship and are wondering what types of accommodations might help make your job more accessible, Careers On-Line lists more than 1000 adaptive technology products and resources and a job accommodation handbook which describes the personal stories of selected students with disabilities and the employers who have hired them.

So what are you waiting for? Anyone who has access to the Internet may reach Careers On-Line by pointing their Internet software to one of the following resources:

gopher:
gopher.disserv.stu.edu port 70
world wide web:
http://www.disserv.stu.umn.edu/TC/Grants/COL

If you need additional help, just call Curt Griesel, our Technology Coordinator at (612) 626-9649.

Happy surfing!■

Beat Winter Blues By Attending Workshops

If you're looking for something to do this winter, why not work on developing your career? The College of Liberal Arts Career Development Office will sponsor **Job Fair '96** Wednesday, February 28 in the Great Hall of Coffman Memorial Union from 10:00 a.m.- 3:00 p.m. Last year, more than 70 companies recruited at the job fair.

On Wednesday, March 6, the **Federal Recruitment Program for Students with Disabilities** will be on campus recruiting students for summer internships with the federal government. To help you prepare for these events, we have scheduled a **Resume Writing Workshop** Thursday, February 8 from 12:00- 1:00 p.m. (with a follow up workshop on Thursday, February 15). The workshops will be held in the Disabled Student Cultural center, Second Floor, Coffman Memorial Union. For more information on any of these programs, call Donna at (612) 626-8035. ■

Dear Donna

Dear Donna:

I am applying for a position as an admissions counselor small university on the East Coast. When I started filling out the application, I noticed that one of the questions asked whether I have a disability. I know this is an illegal question under the Americans with Disabilities Act, but I don't know how to answer the question. What do you think?
Sig*ned QUESTIONING THE QUESTIONS*

Dear Questioning:

You're right, the Americans with Disabilities Act makes it illegal for employers to ask applicants if they have a disability, but as you know, this is not always the case. So what do you do when you are asked an illegal question? Well you have a few options. First, you can leave the question blank. Second, you can write "to be discussed in the interview" or third, if your disability does not impede your ability to complete the essential functions of the job, you may answer the question by writing that you don't foresee any problems in being able to perform the job. You may also want to inform the human resources office of the organization to which you are applying that they might want to update their application forms in that they are asking applicants illegal questions.

Dear Donna:

I just graduated with a degree in business and i am interested in applying for an accounting position here at the university. I am a bit concerned though, because as a student, I used extended time for test taking as an accommodation. I'm not sure how this would work on the job? Do you have any suggestions?
Signed RUNNING OUT OF TIME

Dear Running?

First of all, the need for accommodation doesn't stop once you are out of the classroom. Employers are required by the Americans with Disabilities Act to make reasonable accommodations for qualified individuals with disabilities. It is up to the person with the disability to make his/her needs known. At the University of Minnesota, employees with disabilities may receive assistance in determining reasonable accommodations through the Employment Accommodations unit of Disability Services. Disability Services gathers documentation, makes the disability determination and works with the employee and their respective department to determine reasonable accommodation.

Prospective employees with disabilities may also request accommodations in the application and interviewing processes. For example, if an accounting proficiency test is given to all applicants and speed is not an "essential function" of the job, you may request extended time.■

JOB FAIR '96 SCHEDULED FOR FEBRUARY 28TH IN COFFMAN MEMORIAL UNION

Federal Recruiter Scheduled for March 6th

Looking for an opportunity to build your skills and experience? The Federal Recruitment Program for Students with Disabilities will be interviewing University of Minnesota students March 6, 1996. Selected students may be offered paid summer internships or full-time permanent positions with agencies such as the Department of Agriculture, Equal Employment Opportunity Commission, Environmental Protection Agency, or the Department of State. Although the majority of positions are located in Washington, D.C., some are located throughout the United States.
Interviews will be held from 8:30 a.m.- 4:30 p.m. and will last one-half hour. Eight interviews will be scheduled on a first-come, first serve basis. For more information on participation requirements and/or to schedule an interview, call Donna Johnson at (612) 626-8035.■

Careers On-Line

With the implementation of the Americans with Disabilities Act, many human resources professionals are finding that the number of applicants and employees with disabilities is growing. With this increase, comes additional challenges. Employees with disabilities may request accommodations (such as the use of adaptive equipment or shorter, more frequent breaks). Where can human resources professionals gain information on workplace accommodations? If the human resources professional has a computer with access to the Internet, he/she may find answers to accommodation questions on Careers On-Line.

Careers On-Line uses the Internet to post full-time and part-time jobs and internships as well as information on job accommodations and adaptive technology products. The project, funded by the University of Minnesota and the U.S. Department of Education, addresses the need for employers to access more information regarding disability in the workplace as well as the need for college students with disabilities to learn more about their adaptive technology needs. At this time, anyone with Internet access may reach Careers On-Line at no fee through the World Wide Web or Gopher. Careers On-Line will begin charging a fee in October when grant funding ends.

Careers On-Line can be located electronically through the following addresses:
World Wide Web: http://www.disserv.stu.umn.edu/COL/
Gopher: disserv.stu.umn.edu
E-mail: careers@disserv.stu.umn.edu
For more information on Careers On-Line call (612) 626-8035 (V/TTY).

... *Career Connections continued from page 3*

A5 — HR generalist with 5 years of solid experience in a multi-state organization. Strong background in training, staffing, employee relations and developing policy and procedure manuals. Proactive team player who can interact with all levels of management.

A6 — HR professional with 7 years experience as generalist, manager and internal consultant. Strong background in training, organizational development, strategic planning, business planning and quality improvement.

A7 — HR professional with over 5 years experience as a generalist and manager in a variety of industries. Experienced in staffing, payroll, employee relations and department development for a start-up company.

A8 — Customer service focused HR professional with strong work ethic and 11 years progressive experience. Generalist, specializing in compensation, benefits and staffing. Excellent analytical and computer skills. Strong listening, problem solving, written and oral communication and organizational skills.

A9 — Pro-active HR professional with 10+ years strong generalist experience. Legal background primarily in supervision, recruiting, staffing and benefits management. Excellent writing skills and problem solving. Interested in compensation and negotiation areas. Continuing education in HR degree program.

A10, Ericka Hendrickson has been hired by Norwest Technical Services, Inc. as a Training & Development Coordinator, referred by Career Connections. Congratulations Ericka! ⇒

Patrick James Bromelkamp
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MN AHEAD NEWSLETTER

MN Association on Higher Education and Disability **Fall 1994**

MN AHEAD Exhibit Table At LDM Fall Conference

The Learning Disabilities of Minnesota Fall Conference takes place at the Radisson Hotel in St. Paul from November 3 - 5, 1994. MN AHEAD and LDM have worked this year to present more postsecondary sessions than ever before. Session topics include legal rights, transition, college success strategies, classroom technology, and also a panel discussion with University of St. Thomas students. MN AHEAD will also have a booth in the exhibition hall, hoping to introduce more high school learning disability educators, community agencies, and others to our organization. We need volunteers to sign up for a shift to answer questions at our exhibit hall table on Thursday evening, November 3rd from 5:00 p.m.to 8:00 p.m. and on Friday, November 4th from 8:00 a.m. to 3:45 p.m. A shift can be as long as you wish. If you would like to assist, please call Kate Storey at 612/330-1218.

Spring Conference Planning Committee Now Forming

The MN AHEAD spring 1995 conference committee is forming and will be meeting soon to select a site, topic(s), and speakers. You won't want to miss this opportunity to have input into our annual conference. Mary Jibben of Normandale Community College has graciously consented to chair this committee. Please call Mary at 612/832-6000 if you would like to get involved.

Membership Is Easy

We are no longer the Higher Education Consortium on Learning Disabilities (HECLD). The new name reflects our affiliation with the national AHEAD organization. To join MN AHEAD, please refer to the enclosed membership flyer.

JOIN TODAY!

Creating Change On And Beyond The Campus

This summer, 32 students and staff from 16 colleges and universities in the U.S. and Canada gathered at the University of Minnesota -Twin Cities for the first national Institute on Disability and Leadership, hosted by the University's Disability Services and Project LEEDS. Project LEEDS is a federally funded project designed to empower disabled people by fostering the emergence of disabled leaders. The Institute addressed such issues as student-staff alliance to create organizational change on campus, the development of disability identity, and disabled people's sense of themselves as part of a larger disability community and disability rights movement. Projects LEEDS has generated considerable interest among disabled student organizations, disability services personnel, and disability activists around the country for its potential to contribute to the advancement of people with disabilities. For further information about Project LEEDS, please call Gene Chelberg at 612/624-7693.

"Careers On-Line": Employment, Disability, and Technology

by **Rick Battaglia**

One of the toughest challenges in any job search is getting the opportunities to interview. With an exorbitant 70% unemployment rate for people with disabilities, obtaining those all-important interviews can be particularly difficult.

One initiative that addresses this unemployment issue is Careers On-Line. Careers On-Line is a U.S. Department of Education, OSERS (Office of Special Education and Rehabilitative Services), funded project of the University of Minnesota Disability Services, in cooperation with Distributed Computing Services. Careers On-Line establishes an electronic database accessed via Internet by employers, job seekers, and career development professionals. This network linkage should help facilitate the employment process for all three parties.

How does Careers On-Line work? Job seekers access an electronic database network via Internet Gopher to review job, internship, and co-op openings (full-time and part-time) of employers representing a wide range of career options. Most job postings are for the Twin Cities area but other employment databases from outside Minnesota are also included in Careers On-Line. Employers will have the opportunity to review resume data of students and graduates with disabilities. Both students and employers access an adaptive technology product database that provides a comprehensive listing of products and manufacturers. This adaptive technology resource empowers people with disabilities to more effectively access information in various modes such as computers, telecommunications, and electronic communications. A fourth database will be added later that contains job accommodation information. In addition, Careers On-Line provides electronic access to career development resources from another Disability Services project called Career Connections. This database features information about services for students with disabilities such as career assessment and planning, internships, mentoring, job search strategies, and job shadowing.

The information server is a Macintosh workstation at the University of Minnesota. Students and professionals who have access to Internet will be able to access the server via Gopher client software. Anyone without access to Internet may gain the same information by joining one of the participating computer networks, either locally or nationally. Project staff are training students with disabilities and members of participating organizations and businesses in use of the network. Students with disabilities who are proficient in using the network and adaptive technology assist in training others.

With the advent of the Americans with Disabilities Act (ADA), employers are becoming more aware of the need to hire people with disabilities as an integral part of their workforce diversity initiatives. Careers On-Line provides students/graduates with disabilities and employers an opportunity to work together to achieve their objectives.

For more information about Careers On-Line, please contact Rick Battaglia, Project Coordinator, University of Minnesota, 12 Johnston Hall, 101 Pleasant St. SE, Minneapolis, MN 55455, (612) 626-9649 (voice/TTY), (612) 626-9654 (fax), rick_battaglia@dsmail.stu.umn.edu (e-mail).

APPENDIX L

EXECUTIVE SUMMARY OF MARKET RESEARCH STUDY

FEASIBILITY OF PROVIDING DISABILITY CONSULTING SERVICES TO THE MINNEAPOLIS/ST. PAUL BUSINESS COMMUNITY

Lorman Lundsten, Ph.D., Market Research Consultant
Donna Johnson, Career Services Coordinator
Betty Aune, Ed.D., Associate Director
Barbara Robertson, Graduate Research Assistant

Executive Summary

For the past five years, Disability Services has had grants from the U. S. Department of Education to provide career services to students with disabilities and to provide training and consultation to community employers. Because this work has been very successful and there appears to be a continuing need for such services, Disability Services has been exploring alternative ways of supporting this work, in particular, the establishment of a public-private partnership to assist the local business community in their efforts to hire, train, and advance qualified graduates with disabilities.

Disability Services contracted with a consultant to conduct a market research study with assistance from Disability Services staff. The purpose of the study was to determine the feasibility of providing fee-for-service consultation and training to the business community. Data were collected in three phases: individual interviews with perceived competitors; focus group interviews of local human resources professionals representing small, medium, and large companies; and a survey of Twin Cities human resources managers. Recommendations were developed from each analysis and a plan was then drawn up based on a synthesis of those recommendations.

Competitor Analysis

Staff completed 31 interviews with individuals from the following disciplines: employment attorneys and continuing legal education services; long-term and short-term disability insurance providers; workers' compensation vendors; disability advocacy groups, and rehabilitation service providers. After interviewing these professionals, it was determined that although there are

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many disability service providers in the Twin Cities, small employers often do not have the financial resources to provide short-term and long-term disability insurance, which means they do not have the support of disability specialists should an employee need job accommodations. Therefore, the recommendation from this phase of the study was that Disability Services focus on serving the needs of small businesses.

Focus Group Interviews

A qualitative study of large corporations and small businesses was conducted. Small businesses are defined as companies who have up to 90 full-time employees. Three focus groups with a total of 17 participants provided reactions and feedback regarding possible services provided by Disability Services. Key findings included: the business community perceives the proposed services to be consistent with the University's mission of education and outreach; services should be provided on an as-needed basis; small businesses lack financial and staff resources to provide these services in-house; and cost of services is an issue on the part of all businesses. These findings were used to develop a survey which was administered to 700 Twin Cities human resources managers.

Survey

Members of the Twin Cities Personnel Association were surveyed to learn their response to proposed new services for employees and customers with disabilities. Services described included disability awareness training, accessibility audits, employee accommodations, recruitment service, and a disability hotline. Slightly over 200 responses were received with a response rate near 30%.

Findings

Much of the response was positive toward the new service offerings. About 43% admitted to having situations where they were unsure how to implement the ADA. About 36% noted that they have had trouble finding qualified applicants with disabilities. Almost half had recently hired a worker with a disability. About 23% noted difficulties working with employees who developed disabilities on the job. More than half of the firms had access to the World Wide Web.

Some of the responses showed that the firms frequently felt that they were able to handle situations involving employees with disabilities without aid. About 26% thought that agencies already provide the needed services. Almost 40% of the respondents disagree that they have had difficulty in finding needed information in this area. Only 1.4% of the firms note no experience in implementing ADA.

Service Use

Estimates were made of the likelihood of use for each of the services mentioned in the survey. The results proved encouraging. The Hot Line (33.33% would use) and Accommodation Recommendations (27.33% would use) were the most popular. About one-in-five firms would use Recruitment Services and Disability Awareness training. Database Access and Access Audits rated almost as well. Disability Clearinghouse and Search services would be used by about an eighth of the population responding and the least favorite service would be displaying employer information on the Careers On-Line home page, with 8.66% of the population using this service.

Overall, it seems likely that about 52% of the firms sampled would find at least one service attractive enough to use.

Payment Preference

A difficulty found in the survey, reinforcing the findings of the focus group, is the preference for payment. Almost ninety percent of the respondents preferred to pay for the new services by the hour, as needed. This would require making the services available and promoting them, with considerable uncertainty as to when they might be used, or of the patterns of use. A recommended way to combat this is to promote the services heavily in the first months, to charge a moderate entry fee, (perhaps $200.00) and to use the income from the entry fees to promote more membership and usage of the services by those who have signed up.

Marketing Recommendations

It is recommended that the services be promoted heavily in the beginning to achieve this level of usage, and that money be made available for ongoing

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marketing. Spending in year one would be at a higher level than that expected when services have been in the market for two or three years.

The survey also provided information about the likely target market for the services. Accommodation recommendations and basic training in ADA shows more promise with the smaller firms. The other services have similar appeal to big and small employers.

Public and Non-profit firms and those who sell to them are the prime prospects for recruitment services. Another promising finding is that firms who hire the highest percentage of college graduates have the greatest difficulty in finding qualified applicants with disabilities. This would make special access of the University of Minnesota to a pool of qualified applicants with disabilities especially attractive.

On Balance

On balance, the strongest positive finding of the survey was the strong estimate of use (over 50% would use at least one of the services, and a third would use the most popular service). The least positive finding was the preference for payment on an hourly basis. The suggested strategy for dealing with this was a moderate entry fee, dedicated to promoting the usage of the services and further membership.

Proposed Business Plan

The following plan was developed by Disability Services staff in response to the market research findings and recommendations:

Services

- Develop a Disability Hot Line in which staff will answer disability-related questions, make referrals and conduct information searches. Users will pay an annual fee for this service and companies with multiple locations will pay an annual fee per location.

- Continue employee recruitment efforts through Careers On-Line. Users will pay an annual fee to post job listings.

- Provide consultation on accommodations and accessibility. Users will contract with Disability Services on an hourly basis. Note: It will be clear in the contract that Disability Services is **not** providing legal information and that consultants will work with each company's legal counsel.

- Develop customized training. Disability Services will provide on-site customized training at the business site and off site training at the University of Minnesota.

Marketing Plan

The services will be marketed as follows:

- Speak at and attend association meetings (e.g. Twin Cities Personnel Association, American Society for Training and Development)
- Hold seminars two to three times per year
- Send follow up letter/brochure to survey respondents (this will be targeted to respondents who expressed interest in at least one of the services being offered)
- Distribute brochure to other potential customers
- Network with employers at career days
- Develop monthly fact sheets
- Get corporate sponsors
- Inform other service providers of the service so that they will refer their clients when appropriate
- Advertise through WWW, use web site and data on its use in promotional materials
- Make follow up calls and visits to contacts
- Work with University Relations to develop press releases for local newspapers
- Write articles for local business publications (e.g. Corporate Report Minnesota and Twin Cities Business Monthly)
- Place advertisements in local business publications (e.g. Corporate Report Minnesota and Twin Cities Business Monthly)

Benefits of Proposed Plan

The proposed plan is of mutual benefit to the University, its graduates, and the business community. It (a) provides a direct link between community employers and University students/graduates with disabilities who are seeking employment; (b) builds a receptive climate for University graduates with disabilities as they enter the workplace and build their careers; (c) provides needed services to employers in the community; and (d) promotes a positive relationship between the University and the business community.

APPENDIX M

CAREERS ON-LINE CONSULTATIONS

Careers On-Line Consulted with the Following Organizations

Outside University
- Allied Interstate, Inc.
- Anoka Ramsey Community College
- Augsburg College
- Barbara Jerich & Associates
- Bernard Hodes Advertising
- Boston College
- C.H. Robinson Company
- Canadian Clearinghouse
- Cargill Inc.
- Central Intelligence Agency
- Computer Prompting & Captioning
- Dakota County Administration Center
- Dobbs Professional Staff
- DuPont
- EnSearch
- Even Kemp Associates
- First Bank
- First Bank Systems
- Gage Communications
- Goodwill Industries of Orange County
- Hennepin County
- Hennepin Faculty Association
- Hormel Foods Corp.
- HPO Staffing
- IDS
- Land O'Lakes Inc.
- Lawson Software
- Learn PC
- Magic Laborites, Inc.
- Manpower Temporary Services
- Marriott Foundation
- Marriott Minneapolis City
- Massachusetts Rehabilitation Commission
- McMaster University
- Metro State University
- Minneapolis Youth Work Internship Project
- Minnesota Department of Health
- Minnesota Mutual
- Minnesota State Council on Disability
- National Center for Disability
- North Carolina State University
- Northern States Power Company
- Northwest Airlines
- Ohio State University
- Oracle Corporation
- Penn Valley Community College
- Project with Industry
- Salt Lake Community College
- Special School District of St. Paul
- Springfield Technical Community College
- St. Paul Fire & Marine Ins.
- St. Paul Technical College
- Star Tribune
- State Services for the Blind

- SuperAmerica
- TCF Bank Minnesota
- Tohoku University
- TSI Inc.
- U.S. Navy
- University of Cincinnati
- University of Illinois
- University of North Carolina
- University of Oklahoma
- University of Vermont
- University of Waterloo
- Unlimited Boundaries
- Washington Research Institute
- Wisconsin World Wide

Within the University of Minnesota
- Academic Advising Office
- Career Development Office
- College of Agriculture
- College of Natural Resources
- Counseling & Career Center
- CSOM Career Planning
- DS Outreach
- Electrical Engineering
- Human Ecology
- Human Resources
- Institute of Linguistics
- Institute on Community
- Institute on Community Integration
- Law School
- Library
- Materials Management
- Mechanical Engineering
- Placement Office Humprey Center
- Project with Industry
- School of Journalism
- School of Journalism and Mass Communication
- School of Public Health
- Special Education
- Student Employment Center
- The Career Center

APPENDIX N

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